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ABSTRACT BOOK

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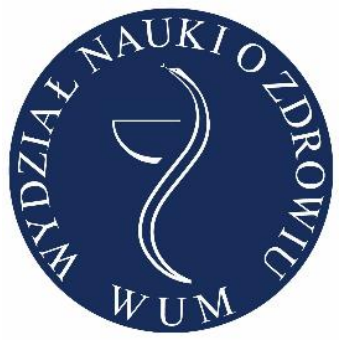

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[781] Chemometric analysis of microbial peptides for use in myopathy

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Introduction

It has been shown, that phenomena in the microbiome of animals correlate to the emergence of diseases like chronic infections, depression or myopathy . We also know, that bacteria produce specific peptides, called quorum sensing molecules (QSM), that allow them to communicate. These peptides interact with the non-bacterial cells surrounding them and are believed to be part of the mechanism regulating the etiology of the aforementioned diseases. What is unknown is what factors are important in deciding, whether certain peptides have a positive or negative effect on pathogenicity.

Aim of the study

The goal of the work was to find a set of variables to describe the peptides (selected QSM) and to evaluate their effect on muscle cell cultures. Initially, we divided the peptides into 6 classes based on their effects on the cell cultures. These classes allow us to analyze the effect of QSM on muscle cells and learn, if certain peptides could be beneficial in restoring myopathic damage thanks to statistical predictions.

Materials and methods

For the analysis we selected 11 parameters for 68 peptides i.e. cell viability, differentiation, particular amino acid content and so on. However, these parameters were not enough to see sufficient clustering in PCA and LDA to reflect the effect of the selected QSMs on muscle cells. To account for the spatial structures of QSMs we used simulated NMR spectra, which greatly improved clustering in LDA.

Results

As a result, 3 clusters of peptides could be described. The first cluster contained peptides with beneficial effects on cell muscles and are characterized by either positive effects on cell viability and differentiation or just one of these variables. The second cluster contains peptides with negative effects on cell muscles, which are characterized by increasing inflammation and the expression of a protein associated with apoptosis. The third cluster consisted of proteins that had a neutral effect on the cell cultures. Thanks to this analysis, we learned which specific areas in QSMs' have an impact in separating one class from another.

Conclusions

As the next step, we are going to use an Artificial Neural Network to predict the effect of new peptides on muscles cells.
Further investigation of this problem could help us classify or even engineer probiotic bacteria for use in treatment and prevention of myopathy.

[839] Arbidol targeting influenza virus A Hemagglutinin; A comparative study

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Introduction
The Hemagglutinin (HA) protein is responsible for binding the virus to host cells with sialic acid (glycans) on the membranes, thus, potential inhibitors that bind strongly to the active site of HA would have the ability to block the viral life-cycle. This elucidated the importance of HA's three-dimensional structure in computer-aided drug discovery and design (CADD).

Aim of the study
Analyze a large collection of HA sequences and 3D structures to study the molecular interactions of HA with Arbidol (ARB) as an inhibitor, using molecular docking programs.

Materials and methods
All HA sequences (94,540 sequences) were downloaded from the fludb database. To build the phylogenetic tree with 1000 sequences, a python code with ETE-toolkit program was used followed by a bootstrap workflow method for high accuracy. The models were generated using the alignment combined with the MODELLER program. To assess the binding energy of the selected inhibitor docking study was performed. AutoDock4 was used to represent different approaches in predicting the conformation of the protein-ligand / protein-protein and protein-glycan complex and its binding energy.

Results
Overall ARB can interact with all HA subtypes, with different affinity depending on the docking pose, and binding free energy of docking conformations. The best lowest root means square deviation (RMSD) value is for Rep7 = 2.71 Å. While the worse RMSD value is for Rep16 = 9.10 Å. Also, the best lowest binding free energy value is for Rep1 = -9.10 Kcal/mol, while the worse Binding free energy value is for Rep15 = -6.45 Kcal/mol.

Conclusions
H4, H5, H6, and H14 subtypes are expected to be the causes of the next influenza pandemics. H7 has the best affinity to interact with ARB to produce the desire action. Followed by H5, H8, then H10, H2, and H1. Besides, H7 has the most similarity and quality in the structure and chemical properties with the reference crystallographic structure. Followed by H10, H14, and H3.

[849] The influence of curcumin on the anticonvulsant effect of lacosamide in maximal electroshock test in mice.

Authors: Agnieszka Konarzewska M.D., Barbara Miziak Ph.D. Supervisor of the paper: Stanisław Jerzy Czuczwar M.D., Ph.D. Prof.
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Introduction

Epilepsy is a chronic neurological disorder characterized by recurrent unprovoked seizures. An epileptic seizure is an episode of abnormal, excessive or synchronous neuronal activity which leads to effects such as uncontrolled jerking movement or as subtle as a momentary loss of awareness. Curcumin, a principal curcuminoid present in turmeric, has an antioxidant, anti-inflammatory and neuroprotective properties. Preclinical studies have indicated its beneficial effect for treatment of epilepsy disorders. Lacosamide is an anticonvulsant drug that exerts its activity predominantly by selectively enhancing slow sodium channels inactivation. Among 1% of the world's population suffers from epilepsy, 30% of patients with epilepsy being drug-resistant therefore there is a constant need of increasing the effectiveness of epilepsy treatment.

Aim of the study

The aim of this study was to evaluate an impact of curcumin on the anticonvulsant effect of lacosamide in maximal electroshock test in mice.

Materials and methods

The experiment was carried out on Swiss male mice. In the control group the animals received lacosamide intraperitoneally in doses range from 5 to 12 mg/kg. In the experimental group curcumin was administered in dose of 60 mg/kg in combination with lacosamide in doses range from 4 to 12 mg/kg. In the moment of lacosamide's maximum effect of action the maximal electroshock test was performed. Based on the dose effect dependence, the value ED50 (which stands for a dose in mg/kg that protects 50 per cent of researched animals from seizure activity) was counted separatelly for lacosamide and for the combination of curcumin with lacosamide. The convulsive activity was delivered via standard ear electrodes. The proof of seizure activity was a whole body clonus that lasted at least 3 seconds with concurrent loss of postural reflex.

Results

The value ED50 for lacosamide (ranges from 6,20 to 9,24 mg/kg) was 7,58 mg/kg and for the combination of curcumin with lacosamide (ranges from 4,85 to 9,39 mg/kg) the ED50 was 6,75 mg/kg.

Conclusions

The results of this study indicate that curcumin did not modify the anticonvulsive potential of lacosamide.

[863] The state of E-cadherin expression in esophageal epithelium in patients with obstructive sleep apnea/hypopnea syndrome

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Introduction

According to the literature data obstructive sleep apnea/hypopnea syndrome (OSAHS) is associated with increased risk of development of oncological diseases with different localization, including esophageal cancer. The exact causes of this phenomenon are currently being studied. The activation of the processes of epithelial-mesenchymal transition seems to be one of these mechanisms, in which the loss of E-cadherin by epithelial cells plays a main role.

Aim of the study

To define the effect of OSAHS on E-cadherin expression in the esophageal epithelium.

Materials and methods

58 patients were included in the study and underwent a somnological investigation. Patients were divided into 3 groups: group 1 (n=17) – patients without OSAHS, group 2 (n=26) – patients with mild OSAHS, group 3 (n=15) – with moderate OSAHS. All patients underwent esophagogastroduodenoscopy with biopsy of the lower third of the esophagus. Micropreparations of the esophageal epithelium were stained with monoclonal antibodies to E-cadherin to assess its expression.

Results

Decreased expression of E-cadherin, in contrast to the comparison group, was found in patients with both mild OSAHS (0,748 (0,623; 0,833) and 0,539 (0,263; 0,676) respectively, p=0,044), and with moderate OSAHS (0,748 (0,623; 0,833) and 0,163 (0,026; 0,365) respectively, p=0,000). Patients with moderate OSAHS had lower E-cadherin expression in comparison with patients with mild OSAHS (2-3=0,046). Correlation between E-cadherin expression and AHI (r=-0,5, p<0,05), AAIresp (r=-0,42, p<0,05), maximum duration of apnea (r=-0,33, p<0,05), DI (r=-0,32, p<0,05), average saturation (r=0,33, p<0,05) were revealed.

Conclusions

OSAHS has a negative impact on the state of esophageal mucousa, contributes loss of E-cadherin by the epithelium, promotes development of disorganization of epithelial tissue and may increase the risks of epithelial to mesenchymal transition and esophageal adenocarcinoma.

[869] Noradrenaline controls of rebound depolarization in medial prefrontal cortex pyramidal neurons.

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Introduction

Rebound depolarization (RD) is a form of membrane depolarization triggered in some neurons following hyperpolarization. Typically, a series of action potentials are evoked during RD plateau. RD converts an inhibitory signal arriving to the neuron into an excitation signal, which is subsequently synaptically transmitted to other cells. The nature of RD in cortical neurons has been tested for several years without satisfactory explanation.

Aim of the study

The aim of our study was to evaluate the influence of adrenergic receptors activation in RD generation. Î±1, Î±2, and Î¸-receptors have been tested.

Materials and methods

Experiments were performed on layer V medial prefrontal cortex (mPFC) pyramidal neurons in slices obtained from adult (58-65-day-old) male rats. Recordings of membrane potential were performed in a whole-cell current-clamp configuration in the presence of tetrodotoxin (TTX, 0.5μM), glutamatergic and GABAergic blockers (10 μM DNQX, 50 μM DL-AP5, 10 μM picrotoxin) in extracellular solution. Therefore, the tested neurons were synaptically isolated.

Results

The resting membrane potential in the tested neurons was -67.9±0.95 mV. RD exhibited the following properties: evoked after prior cell hyperpolarization below -80 mV, had a threshold close to the resting membrane potential, an amplitude of 30.6±1.2 mV. Adrenergic receptors stimulation by noradrenaline
(NA, 50 μM, n=6) and cirazoline (**α**1-adrenoceptor and imidazole agonist, 100 μM, n=7) evoked RD. Neither isoproterenol (**β**-adrenoceptor agonist,100 μM, n=5) nor clonidine (**α**2-adrenoceptor agonist, 100 μM, n=5) significantly changed the membrane potential level when applied to the extracellular solution alone.

Conclusions

The obtained results suggest that RD in layer V mPFC pyramidal neurons is evoked by the activation of Î±1-adrenoceptor, while the activation of Î±2-adrenoceptor and Î¸-adrenoceptor don't arouse RD.

[908] Does occurrence of ARGs vary between patients hospitalized in the surgical and non-surgical units?

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Introduction

Occurrence of antibiotic resistance genes (ARGs): ermF, cfxA and nim correlates with antibiotic resistance to erythromycin (MLS phenotype), beta-lactams and metronidazole, respectively. Bacteroides and Parabacteroides are a part of natural microbiome of gastrointestinal tract. Antimicrobial resistance (AMR) in these groups increased over the last years. Bacteria tend to be more resistant in stool rather than in other specimens.

Aim of the study

The prevalence of ermF, cfxA and nim genes in bacteria from Bacteroides non-fragilis and Parabacteroides species in stool samples from patients with diarrhea hospitalized in the surgical and non-surgical units.

Materials and methods

In our study 146 strains from 97 stool samples suspected of occurrence of antibiotic-associated diarrhea and hospitalized in Clinical Hospital in Warsaw were examined between 08.2019-01.2020. Patients stayed at surgical (general surgery, transplantology, urology, orthopedics) and non-surgical (cardiology, internal medicine, geriatrics and dermatology) units. Stool samples were plated onto Bacteroides Bile Esculin Agar (BBE, USA) and were incubated in 37°C in anaerobic conditions for 48 hours. Isolation of colonies was performed on Schaedler Agar and Columbia Agar (oxygen control), (biorieux, France). For identification of isolates, we used mass spectrometry MALDI-TOF MS of VITEK MS (biorieux, France). DNA isolation was performed by Genomic mini kit (A&A Biotechnology). PCR assays were used to detect the presence of resistance genes. Amplification products were analyzed by electrophoresis in agarose gel stained with ethidium bromide.

Results

ErmF and cfxA genes were detected in 43 (46%) and 40 (42,5%) strains from the surgical units and in 25 (48%) and 24 (46%) strains from the non-surgical units, respectively. One strain with nim gene was identified in the non-surgical unit.

Conclusions

Prevalence of ermF and cfxA in stool strains is significant in both surgical and non-surgical units, while nim gene tends to be rarely detected. High detection rates of the ermF and cfxA genes suggest that these strains act as reservoirs for antibiotic resistance genes. For proper management of antimicrobial resistance development in Bacteroides non-fragilis group of bacteria, it is necessary to determine antimicrobial resistance patterns and closely observe the resistance genes. It is important to monitor occurrence of resistance genes in chronically hospitalized patients because their transfer to new environments facilitates grow of resistance.

[1003] Genotype analysis of Bacteroides fragilis - MLSB resistance genes detection in loose stool samples

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Introduction

The most important anaerobic pathogene in humans is Bacteroides fragilis - a rod-shaped, Gram-negative, obligately anaerobic bacteria. Despite constituting only 0,5%-2% of intestinal microflora, it causes most of the abdominal infections. Recently there has been observed a significant increase in antibiotic resistance among the Bacteroides group, especially in antimicrobial resistance for clindamycin, an antibiotic commonly used in outpatient settings, characterized by very favourable properties. Clindamycin resistance among Bacteroides strains may occur due to various mechanisms. The synthesis of a 23S rRNA methyltransferase encoded by erm genes, known as MLSB cross-resistance, is particularly important. It can be either inducible or constitutive. Another mechanism of aforementioned bacilli resistance to clindamycin are efflux pumps encoded by msrSA and mefA genes.

Aim of the study

The research aim is to investigate the occurrence of reduced macrolides, lincosamides and streptogramins B susceptibility - termed as MLSB resistance genes - ermB, ermF, ermG, msrSA and mefA in 41 B.fragilis specimens isolated from loose stool samples from patients of teaching hospital in Warsaw.

Materials and methods

Colonies of B.fragilis were isolated from stool samples collected in a period of VIII.2019-II.2020. Samples were grown on the Bacteroides Bile Esculin Agar for 48 hours in 37°C in an anaerobic environment. Colonies were isolated on Schaedler Agar and Columbia Agar(aerobic growth control). For identification of colonies' genres there was used a mass spectrometry technique MALDI-TOF MS of VITEK MS system (bioMerieux, France). Identified strains were grown in a brain-heart broth(BHI) in purpose of genomic DNA isolation (Genomic Mini). Selected genes (ermB, ermF, ermG, msrSA and mefA) were detected using polymerase chain reaction (PCR). Obtained DNA fragments were separated using electrophoresis in 1% agarose gel.

Results

41 strains of B.fragilis were isolated from diarrheal stool samples.ErmB genes occurred in 1 of all samples (2.44%), ermF gene was found in 8 strains(19.5%) ermG was found in 2 strains(4.88%). MsrSA gene was found in 2 strains(4.88%) and mefA occurred in 3 strains(7.31%). Two strains of B.fragilis presented occurrence of three(ermG, mefA and msrSA) MLSB resistance genes.

Conclusions

29 strains of B.fragilis occurred to have none of MLSB genes, 12 strains(29.27%) occurred to have at least one of MLSB gene.
ErmF gene was isolated predominantly among other MLSB resistance genes.

[1035] Pathomorphological features of liver and lung fibrosis in patients with non-alcoholic steathepatitis and obesity for comorbidity with chronic obstructive pulmonary disease

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Introduction

The comorbid course of nonalcoholic steatohepatitis (NASH) on the background of obesity and chronic obstructive pulmonary disease (COPD) has a number of clinical features and is characterized by the syndrome of mutual burden.

Aim of the study

To study the histochemical and histological features of liver and lung tissues in patients with non-alcoholic steatohepatitis (NASH) and obesity by a comorbid course with chronic obstructive pulmonary disease (COPD).

Materials and methods

The autopsy material was used for 27 cases of NASH, including 13 cases of NASH and obesity of I degree (group 1), 14 cases of NASH, obesity of I degree with comorbid COPD of II-III stage (group 2). The comparison groups included autopsy material of 12 patients with isolated COPD of II-III stage. (Group 3), as well as 11 practically healthy persons (PHP), the main causes of death were polytrauma or traumatic brain injury or sudden coronary death. The groups were randomized according to age, sex, degree of obesity. The average age of patients was (59,3 ŚĪ 3,21) years.

Results

The volume of connective tissue (CT) in the liver parenchyma in the 2nd group was in 1,9 times higher than in the 1st group ($p<0,05$), the specific volume of collagen fibers in 1,4 times, the optical density of collagen fibers by 1,2 times ($p<0,05$). In the 2nd group, the maximum damage to the respiratory parts of the lungs (RPL) was established in terms of percentage of filling of the RPL spaces with desquamated cells (in 9.4 times in comparison with PHP, by 1,3 times compared to the indicator in the 3rd group); increased the specific volume of blood vessels in the peribronchial CT by 1,4 times ($p<0,05$). The phenomena of venous thrombosis are most pronounced both in the peribronchial CT (they exceed the indicator in the 3rd group by 1,2 times) and in the respiratory parts of the lungs (by 2,4 times) ($p<0,05$). Patients of the 2nd group had the highest values of the specific volume of CT in the lungs among all study groups (19,8 ŚĪ 0,37 ($p <0,05$)).

Conclusions

The comorbidity of COPD in patients with NASH and obesity contributed to the higher degree of activation of connective tissue components in the liver parenchyma in comparison with the NASH indicators against the background of obesity without COPD, with an increase in the volume of connective tissue (in 1,9 times, $p<0,05$), specific volume collagen fibers (by 1,4 times, $p<0,05$), optical density of collagen fibers coloring (in 1,2 times, $p<0,05$

[1083] The changes of morphometric parameters and protective effect of lipin on burn-induced lung injury in rats

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Introduction

Lung injure is one of the most common complications of burn disease. Understanding of the morphofunctional changes in lungs after thermal trauma is important to search for new effective treatment. Lipin (phosphatidylcholine liposomes) has antihypoxic and cytoprotective effects, but administration of lipin at burn disease requires further investigation.

Aim of the study

Evaluation of morphometric parameters of lungs at burn disease and analysis of effect of lipin on morphological changes in rats lungs

Materials and methods

The study was carried out on 112 white male rats, weight 180-200g. Under general anesthesia, hind limbs were exposed to 75Ś°C bath for 7s to induce 12-15% total body surface area full-thickness burn. Lipin was injected intraperitoneally (50 mg/kg) immediately after the thermal injury and continued with the same dose one a day. Morphological investigation was performed on the 1st and 7th days after thermal trauma. Slides were stained with hematoxylin-eosin, investigated with microscope MIKROmed SEO SCAN, and analysed with ImageJ software. We measured mean alveolar diameter, mean diameter of terminal bronchioles, and bronchial wall thickness.

Results

We found that the mean alveolar diameter reduced in 1.58 times ($p<0.05$) on the first day in comparison with control group, on the 7th day of burn disease - in 1,42 times ($p<0.05$), indicating atelectasis. On the 1st day mean diameter of terminal bronchioles decreased in 1.46 times ($p<0.05$), on the 7th day - in 1.21 times. Bronchial wall thickness increased in 1.33 times ($p<0.05$) on the 1st day and remained such changes on the 7th day. It confirms bronchospasm and bronchial edema. With correction by lipin, the mean alveolar diameter at first decreased in 1.35 times ($p<0.05$), then - in 1.28 times ($p<0.05$) in comparison with rats without correction. The mean diameter of bronchioles reduced in 1.42 times ($p<0.05$) on the 1st day, and in 1.13 times in a week. Bronchial wall thickness increased in 1.18 times on the 1st day, on the 7th day - in 1.12 times.

Conclusions

Experimental burn disease causes atelectasis, bronchial edema, cells infiltration of bronchial wall, and bronchospasm in lungs. Correction by lipin attenuates the destructive effects in alveoli and terminal bronchioles of rats lungs after thermal trauma.

[1088] Analysis of the role of FRMD5 in papillary thyroid carcinoma

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Introduction

Thyroid cancers are the most commonly diagnosed type of neoplasm of the endocrine system. Papillary thyroid carcinoma (PTC) is the most frequent type of thyroid cancer. PTCs are accompanied by the presence of certain genetic alterations, including BRAF mutant alleles, which are found in up to 80% of all cases. Nevertheless, the molecular mechanisms and factors involved in the pathogenesis of PTCs are still poorly understood. In the present study, we investigated the role of the FRMD5 protein, which was found to be predominantly expressed in PTCs bearing the BRAF mutation (BRAF-V600E). FRMD5 belongs to the FERM-domain containing family, which occupies a unique position in cellular metabolism, cytoskeletal formation, and signal transduction.

Aim of the study

The aim of the study was to examine the role of the FRMD5 protein in PTC cells in vitro. We were particularly interested in studying the relationship between the expressional status of FRMD5 and proliferation, adhesion, and metastatic potential of PTC cells.

Materials and methods

The role of FRMD5 was determined using two PTC-derived cells lines: TPC1 (BRAF-wt) and BCPAP (BRAF-V600E). The expression of the protein was knocked-down via transfection with siFRMD5. The mRNA expression and protein yield were evaluated using RT-qPCR and Western blot techniques. Proliferation, adhesion, migration, invasiveness, colony formation (spheroids) and survival (MTS) tests were performed to establish the role of FRMD5 in PTC cells. Additionally, gene expression profiling with RNA-Seq was used in the study.

Results

It was found that FRMD5 expression is enhanced in BRAF-V600E cells, and therefore, may be crucial for progression of PTCs. It was observed that depletion of FRMD5 expression resulted in a reduced migratory rate and invasive potential of PTC BRAF-wt cells. However, impaired spheroid formation and altered expression of the ABCB1 gene encoding P-gp (a major multi-drug resistant - MDR protein) was observed exclusively in BCPAP cells harbouring the BRAF-V600E mutation.

Conclusions

The obtained data signify the importance of the FRMD5 protein in regulation of the metastatic potential and multidrug resistance of PTC cells. We imply that the presence of certain genetic aberrations (e.g. BRAF-V600E allele) is associated with the activity of FRMD5.

[1098] Mixed-Lineage Kinase 4 (MLK4) inhibition as a promising anti-cancer strategy for triple negative breast cancer treatment

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Introduction

Triple negative breast cancer (TNBC) is an aggressive subtype of breast cancer associated with high mortality rate. Currently, the are no effective targeted therapies applicable for the treatment of early-stage TNBC. We have previously showed that MLK4 is significantly upregulated in TNBC and it plays a crucial role in proliferation, invasiveness and migration of breast cancer cells via NF-kB-dependent pathway.

Aim of the study

Evaluation of the potency of MLK4 inhibition in combination with doxorubicin treatment in triple negative breast cancer.

Materials and methods

Viability assays and in vitro kinase assays were performed in order to validate the efficacy of MLK4 inhibitors (CEP5214 and CEP1347). TNBC cell lines (e.g. HCC1806) with or without MLK4 knockdown were treated with doxorubicin and subjected to viability assays and spheroid formation assay in 3D cultures. Apoptosis rates were measured with caspase 3/7 detection assay and annexin V staining on flow cytometry.

Results

In vitro kinase assays confirmed that MLK4 inhibitors are capable of blocking the catalytic activity of MLK4 in nanomolar concentrations. The inhibition of MLK4 significantly decreased TNBC cell lines viability in a dose-dependent manner. Combination of MLK4 knockdown and doxorubicin treatment reduced clonogenic potential of breast cancer cells and suppressed the formation of breast cancer spheroids in Matrigel-based 3D cell culture. Furthermore, MLK4 knockdown resulted in enhance of apoptosis induction after treatment with doxorubicin in 2D and 3D conditions. Finally, we have showed that combined treatment with doxorubicin and MLK4 inhibitor exerts synergistic cytotoxic effect on triple negative breast cancer cells.

Conclusions

Our results indicate that MLK4 depletion sensitizes triple negative breast cancer cells to doxorubicin treatment. Combined treatment consisting of doxorubicin and MLK4 inhibitor might be regarded as a new promising therapeutic strategy for TNBC treatment.

Cardiology & Cardiosurgery

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Serce Dziecka

[771] Acute myocardial infraction in COVID-19 and Non-COVID-19 patients

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Introduction

Severe acute respiratory syndrome coronavirus 2 (Sars-Cov2) has affinity to cardiovascular system via ACE receptors, what may lead its major impact on the clinical course of acute myocardial infraction (AMI).

Aim of the study

The aim of the study was to compare in-hospital course and 3-month survival of AMI patients with and without Covid-19 infection in pandemic period.

Materials and methods

Overall, 150 consecutive patients with AMI hospitalized at one tertiary reference cardiology center, between October 2020 and January 2021: 30 with COVID-19 (mean: age 74.5 years; 40% STEMI; 40% with radiologically confirmed pneumonia) and 120 without COVID-19 infection (mean: age 69.2 years; 31% STEMI; 5% with radiologically confirmed pneumonia) were enrolled into the study. Analysis involved clinical characteristics, laboratory tests, results of imaging methods, in-hospital as well as 3-month survival rate.

Results

COVID-19 patients were older (p=0.029), had significantly lower left ventricular ejection fraction (p=0.019), higher troponin I (p=0.006) and CK-MB (p=0.031) levels. Infected subjects presented higher level of d-dimer (12xnormal range), hsCRP (16x normal range) and IL-6 (260x normal range). In COVID-19 patients troponin I concentration positively correlated with hsCRP level, white blood cells count and neutrophils count. Primary PCI was performed in 68% COVID-19 and in 90% non-COVID-19 patients (p=0.03). Hospitalization was longer in COVID-19 subjects (p=0.003) and atrial fibrillation was more frequent in this group (p=0.014).

Both in-hospital mortality (33% vs 13%, p=0.004) as well as 3-month mortality (53% vs 20%, p=0.001) was higher in COVID-19 group.

Conclusions

COVID-19 infection significantly modifies a clinical course of AMI. There is observed more severe myocardial damage related to inflammatory activation and less invasive reperfusion treatment, prolonged and complicated hospitalization and higher 3-month mortality rate.

[873] Computer-simulated stents and virtual reality in planning intravascular treatment of aortic coarctation

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Introduction

3D modelling is frequently used in interventional cardiology, but the method is still restricted by the time required to print a model and the price of materials and real stents. Our idea was to examine if bypassing the 3D printing and relying only on virtual models is a viable option to plan procedures of aortic coarctation stenting.

Aim of the study

To assess the accuracy of predicted stent selection made relying solely on 3D models and virtual reality.

Materials and methods

A group of 15 paediatric patients with aortic coarctation treated with intravascular stent implantation, who had a CT scan performed prior to the procedure, was chosen. Each tomography was processed in Materialise Mimics to produce a model of the narrowed aorta and surrounding structures. A range of possible stents were then chosen independently by 2 researchers and modelled into the aorta in Materialise 3-matic. The complete models were assessed in Mimics Viewer using virtual reality headset in order to choose an optimal stent, which was later compared with the device used to treat the patient.

Results

In 3 cases a stent with identical or approximate dimensions was chosen. In further 3 cases, the stent actually used in the procedure was taken into consideration, but we chose another. The overall diameter of the chosen stents was identical in 7 cases, in 7 the difference did not exceed 2 mm. The length of the stents was identical in 3 cases and in 9 the difference did not exceed 7 mm.

Conclusions

The method of computer modelling provided a satisfactory success rate of predicting the possible stents to use during procedure. Creating a model prior to the procedure may also help to avoid complications, as in one case we deliberately chose a narrower stent in order not to compress the left bronchus and the same stent was actually used in that patient. We also considered whether to use bare or covered stents in cases where the stent could obstruct the left subclavian artery. The differences in chosen stents may have been caused by our lack of experience in interventional cardiology, the lack of availability of certain stents in the Cardiovascular Interventions Laboratory at the time of the procedure and the lack of information about the diameter of the vascular access, which has an impact on the maximal diameter of the vascular sheath.

[947] Plasma trimethylamine-N-oxide is an independent predictor of long-term cardiovascular mortality in patients undergoing percutaneous coronary intervention for acute coronary syndrome

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Introduction
Acute coronary syndrome (ACS) remains a leading cause of mortality worldwide. Patients who experienced ACS are at high risk of future cardiovascular events and death. Identification of reliable predictive tools could potentially improve the risk stratification. Numerous studies revealed that intestinal microbial organisms (microbiota) and its metabolites, as TMAO (trimethylamine-N-oxide) may play a pathogenic role in a cardiovascular disease (CVD) and ACS. Elevated concentration of circulating TMAO has been associated with increased risk of CVD and major adverse cardiac events (MACE), including myocardial infarction (MI), stroke, major bleeding and all-cause mortality.

Aim of the study
To investigate the association of liver metabolite TMAO with cardiovascular disease (CV)-related and all-cause mortality in patients with acute coronary syndrome (ACS) who underwent percutaneous coronary intervention.

Materials and methods
Our prospective observational study enrolled 292 patients with ACS. Plasma concentrations of TMAO were measured during the hospitalization for ACS. Observation period lasted 7 years in the median. Adjusted Cox-regression analysis was used for prediction of mortality.

Results
ROC curve analysis revealed that increasing concentrations of TMAO levels assessed at the time point of ACS significantly predicted the risk of CV mortality (c-index=0.78, p<0.001). The cut-off value of >4 ÎĽmol/L, labeled as high TMAO level (23% of study population), provided the greatest sum of sensitivity (85%) and specificity (80%) for the prediction of CV mortality and was associated with a positive predictive value of 16% and a negative predictive value of 99%. A multivariate Cox regression model revealed that high TMAO level was a strong and independent predictor of CV death (HR=11.62, 95% CI: 2.26-59.67; p=0.003). High TMAO levels as compared with low TMAO levels were associated with the highest risk of CV death in a subpopulation of patients with diabetes mellitus (27.3% vs 2.6%; p=0.004). Although increasing TMAO levels were also significantly associated with all-cause mortality, their estimates for diagnostic accuracy were low.

Conclusions
High TMAO level is a strong and independent predictor of long-term CV mortality among patients presenting with ACS. TMAO concentration of 4€‰ÎĽmol/L may be a cut-off value for prognosis of ACS patients.

[974] Complete revascularization in coronary-artery bypass grafting and atrial fibrillation

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Introduction

Randomized controlled studies have repeatedly shown the benefit of complete - as compared to incomplete revascularization for multivessel coronary artery disease (MV-CAD), as it will result in the reduction of repeat revascularization, myocardial infarction (MI), or death. Atrial fibrillation (AF), described as an independent predictor of mortality and morbidity during coronary-artery bypass grafting (CABG), is present in about 8% of patients undergoing CABG for MV-CAD further adding to baseline procedural risk. Whether there exists any benefit from CR in MV-CAD with underlying AF and, particularly, in the long-term, has never been addressed in a single study.

Aim of the study

We aimed to investigate whether complete revascularization (CR) is associated with improved long-term survival of patients with AF undergoing CABG.

Materials and methods

As a part of the HEart surgery In preoperative atrial fibrillation long reSulTs (HEIST) clinical trial, we retrospectively collected data from Polish National Registry of Cardiac Surgery Procedures (KROK). 5,738 patients with MV-CAD and AF (77.9% men, mean age 69.0ŚĪ8.0) undergoing isolated CABG surgery between 2006-2019 in 37 reference centres across Poland included in the registry were analysed. We divided patients into complete- and non-complete revascularization groups and used propensity score (PS) matching to create pairs with similar baseline profile. Primary endpoint was long-term survival.

Results

Median follow-up was 5 years ([IQR 1.9-7.6], max.13). PS matching included 380 pairs divided into CR and non-CR groups. Subjects were no different in terms of baseline risk and surgical characteristics. Cardiopulmonary bypass (CBP) and aortic X-clamp times were significantly longer in CR group (median 79 vs 65 minutes and 40 vs 34 minutes respectively, $p<0,05$ for both). In-hospital outcomes and mortality risk at 1-year (Hazard Ratio [HR], 95% Confidence Intervals [CIs]: 1.38 [0.91-2.08]; P=0.129) was unchanged with CR. Conversely, in a long-term analysis CR was associated with 40% improved survival: HR 0.59; (95%CIs: 0.46-0.76); $P<0.001$.

Conclusions

Complete revascularization in patients with MV-CAD and pre-operative AF is safe, despite longer CPB and aortic X-clamp times. Although no significant differences in in-hospital and 1-year mortality between CR and non-CR groups were found, in a long-term follow-up in a propensity matched cohort, complete revascularization was associated with significantly improved survival.

[980] Total Arterial Revascularization Coronary Artery Bypass Grafting in patients with atrial fibrillation.

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Introduction

Atrial fibrillation (AF) is a relatively common comorbidity among patients referred for Coronary Artery Bypass Grafting (CABG) with multiple studies showing AF association with poorer prognosis. Despite of the fact that little is known about how surgical technique (i.e. conduit selection) influences survival in this population, many surgeons tend to choose arterial grafts due to their superior long-term patency and lower rates of myocardial infarction, as compared to traditional saphenous vein grafts (SVG). It led to the popularization of total arterial revascularization (TAR).

Aim of the study

Our aim was to assess whether TAR is associated with improved long-term survival of patients with AF undergoing CABG.

Materials and methods

As a part of the HEIST (HEart surgery In preoperative atrial fibrillation long term reSulTs) study, we retrospectively analysed data from the Polish National Registry of Cardiac Surgery Procedures. Between 2000 and 2019, 191.429 patients underwent isolated CABG, of which, 7,912 (4.13%) presented with pre-operative AF. Among patients who achieved complete revascularization, we identified cases of TAR and used propensity score matching to determine non-TAR controls.

Results

Median follow-up was 4.1 years ([IQR 1.9-6.8], max. 15.1). Propensity Matching resulted in 295 pairs of TAR vs non-TAR. Operative and 30-day mortality were no different between TAR and non-TAR patients (Hazard Ratio [HR] and 95% Confidence Intervals [CIs]: 0.17 (0.02-1.38) P=0.123 and 0.74 [0.40-1.35] P=0.327), respectively. On contrary, TAR was associated with a nearly 30% improved late survival: HR 0.72 [0.55-0.93] P=0.013. This benefit was sustained in subgroup analyses, yet most appraised in low-risk patients (<70 y.o.; EuroSCORE II <2; no diabetes) and when off-pump CABG was performed. It was also found that use of left internal mammary artery (LIMA) for left anterior descending (LAD) artery revascularization in TAR group was associated with superior survival as compared to use of vein for LAD revascularization: HR 0.33 [0.20-0.53], P<0.001 for long-term mortality.

Conclusions

Total arterial revascularization in patients with pre-operative AF is safe and is associated with improved long-term survival, especially in the group of younger patients with an off-pump surgery. Moreover, LIMA to LAD is associated with an overwhelmingly superior long-term survival as compared to SVG to LAD, that reinforces the importance of TAR and underscores the importance of LIMA to LAD, especially in AF patients.

[1009] High concentration of symmetric dimethylarginine is associated with low platelet reactivity and increased bleeding risk in patients with acute coronary syndrome

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Introduction

One of the promising biomarkers in CVD are asymmetric dimethylarginine (ADMA) and symmetric dimethylarginine (SDMA), which are products of L-arginine methylation and are both involved in endothelial dysfunction. ADMA, SDMA and L-homoarginine, have emerged as biomarkers linked to cardiovascular outcomes.

Aim of the study

To investigate the association of SDMA with platelet reactivity and bleeding risk in patients with acute coronary syndrome (ACS) treated with potent P2Y12 inhibitors prasugrel and ticagrelor.

Materials and methods

Our prospective observational study enrolled 292 patients. Plasma concentrations of SDMA were measured during the hospitalization for ACS. Impedance aggregometry was used. The primary study endpoint was the concentration of metabolites and platelet reactivity. The primary clinical outcome endpoint was the incidence of Thrombolysis in Myocardial Infarction (TIMI) bleeding events (major, minor and minimal). The efficacy endpoint was the composite of major adverse cardiac events (MACE: stent thrombosis, myocardial infarction, stroke and cardiac death).

Results

There was an inverse correlation between SDMA serum levels and platelet reactivity ($r = -0.25$; $p < 0.001$). The ADP+PGE1-induced platelet reactivity was 33% lower among patients with the highest SDMA quartile (4th) as compared to those with the 1-3rd SDMA quartile (8 [0-29] vs 12 [0-126] U; $p < 0.001$). The arachidonic acid (AA)-induced platelet reactivity was 56% lower among patients with the highest SDMA quartile (4th) as compared to those with the 1-3rd SDMA quartile (4 [0-48] vs 9 [0-133]; $p < 0.001$). In a multivariate model, the highest SDMA (4th) quartile was found to be an independent predictor of the lowest ADP+PGE1 and AA-induced platelet aggregation (OR: 2.666, 95% CI [1.184-5.999], $p = 0.018$).

Conclusions

Our study shows that high plasma concentration of SDMA, but not ADMA, is independently associated with low platelet reactivity to ADP and AA and is associated with major and minor bleeding events in patients with ACS on potent antiplatelet therapies. Therefore, SDMA might have a potential to be further evaluated as a blood biomarker for individualization of duration and potency of antiplatelet therapies in an ACS population at high risk of bleeding complications.

[1010] Increased Let-7e expression is associated with long-term all-cause mortality and antiplatelet treatment in patients with type 2 diabetes mellitus

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Introduction

In the light of growing prevalence of type 2 diabetes mellitus (T2DM), efforts are made to discover novel biomarkers. MicroRNAs (miRNAs-miR) are non-coding RNAs used in various processes involved in regulating gene expression which play a role in platelet function.

Aim of the study

To analyze the ability of platelet-derived miRNAs in the prediction of mortality and response to antiplatelet treatment among T2DM-patients.

Materials and methods

252 diabetic subjects were enrolled and were receiving either acetylsalicylic acid (ASA) 75mg (65%) or 150 mg (15%) or clopidogrel (19%). Plasma miR-126, miR-223, miR-125a-3p and Let-7e expressions were assessed by qRT-PCR and compared between the patients who survived and those who died. Median observation time was 5.9 years. Adjusted Cox-regression analysis was used for the prediction of mortality. Differential miRNAs expression due to different antiplatelet treatment was analyzed.

Results

ROC curve analysis revealed increasing concentrations of miR-126, Let-7e and miR-125a-3p levels had a diagnostic ability for prediction of long-term all-cause mortality (c-index = 0.75, $p < 0.001$; 0.72, $p < 0.001$; 0.72, $p = 0.001$, respectively). Multivariate Cox regression model revealed high miR-126 and Let-7e expressions which were strong and independent predictors of all-cause long-term mortality (HR = 5.08, 95% CI: 1.92-13.43; $p = 0.001$; HR = 5.94, 95% CI: 1.98-17.79; $p = 0.001$,respectively). After including all miRNAs into one multivariate Cox regression model, only Let-7e was predictive of future occurrence of long-term all-cause death (HR = 7.83, 95% CI: 1.2-51.1; $p = 0.032$). MiR-126, Let-7e and miR-223 expressions in the clopidogrel group were significantly higher than in the ASA group ($p = 0.014$; $p = 0.013$; $p = 0.028$, respectively).

Conclusions

Let-7e expression is a strong and independent predictor of long-term all-cause mortality among patients with T2DM. MiR-223, miR-126 and Let-7e present significant interactions with antiplatelet treatment and clinical outcomes.

[1042] Management of the pediatric cardiac surgery during COVID-19 worldwide pandemic - single center experience.

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Introduction

The SARS-CoV-2 infection, since first diagnosed in China in late December 2019, became a spreading worldwide pandemic, and seriously affected many areas of public health and systems of care. As the first case of COVID-19 was confirmed on 4th of March 2020 in Poland, the National Health Found Institution recommended the limitation of elective surgeries from the 23rd of March until further notice. However, babies with congenital heart defects (CHD) continued to be born usually with the need of emergency surgery in a narrow period of time, to provide an effective result and prevent from life-threating complications.

Aim of the study

The aim of this study is to investigate the effect of COVID-19 pandemic on congenital heart defects surgery program, and its institutional performance in pediatric cardiac surgery department.

Materials and methods

In order to compare the COVID-19 pandemic vs pandemic-free performance the data was compared between 2018 with 2019 (pre-COVID group) and 2020 (COVID group). Basic data: admittance, hospital stay duration, number of patients per month, cardiac surgeries performed as well as final results were collected and compared between the groups in 12-monts-long periods.

Results

The number of admissions to the department (n=892 in 2018, n=942 in 2019, 978 in 2020), monthly average number of cases (74 in 2018, 79 in 2019, 82 in 2020) average time of hospital stay (M= 4,20, SD= 14,33 in 2018; M=3,36 SD=5,50 in 2019; M=3,66 SD=5,77 in 2020) (p=0.335 for 2018/2020 and p=0.575 for 2019/2020) did not show any significant difference. The pre-COVID number of cardiac surgeries was 201 in 2018 and 218 in 2019 (101/102 with use of extracorporeal circulation [ECC], 100/116 non-ECC [2018/2019]) similar to 221 during COVID year (94 with use of ECC, 127 non-ECC). No significant difference was observed in terms of STAT mortality scores and postoperative results of the operations performed between the two years. During the COVID year a strict safety precautions were instantly implemented at the department. Any SARS-CoV-2 infection or its complications among patients, their parents or institutional staff was not confirmed during COVID year. For all calculations P value was set at less than 0.05.

Conclusions

Congenital cardiac surgery program can be safely and effectively performed without restricted case volume on the condition that appropriate safety precautions are conscientiously maintained during the pandemic period.

[1054] Coronary arteries in Fibromuscular Dysplasia. 3-dimensional coronary CT, case-control study. ANIN FMD REGISTRY

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Introduction

Fibromuscular dysplasia (FMD) is an arterial disease leading to stenoses and aneurysms of medium-size arteries. Other lesions include arterial tortuosity. However, limited data are available on the involvement of coronary arteries in pts diagnosed with €žextra-coronary" FMD.

Aim of the study

To examine FMDs impact on coronary artery involvement, lesions and coronary tortuosity in patients with a diagnosis of FMD.

Materials and methods

We enrolled 103 (age 45.7ŚĪ13.2, 82 women) pts with a diagnosis of FMD, in whom coronary artery disease (CAD) was excluded by coronary CTA, and 96 (age 47.3ŚĪ12.2, 75 women) sex- and age-matched controls without CAD based on CTA imaging. Analysis of coronary arteries was assessed, including arterial tortuosity, defined as curves >30 OR >45 OR >90 degrees. Tortuosity Index (TI) was defined as number of curves x artery length (centerline)/vector artery start-end. Each evaluation was performed per coronary segment. Size (area, length) of the arteries was also measured.

Results

Intravessel symmetry sign and cork-screw sign were more common in arteries of FMD pts than in controls (5.4% vs 1.3%, p<0.001; 1.2% vs 0%, p=0.03). Number of arterial curves and TI of LAD, LCx and RCA were higher in FMD patients than in controls (arterial curves: p<0.01 for all arteries - TI: 14.9 vs 8.5 for LAD, 9.8 vs 6.6 for LCX, and 11.2 vs 6.6 for RCA; p<0.001 for all arteries). According to the segmental analysis, AUC under the ROC curve indicated the highest value for prediction of FMD for the number of curves (>30 degrees) (0.777;95%CI:0.713 to 0.833) or TI (0.794;95%CI: 0.731 to 0.848), both in distal LAD. For the distal LAD indices, the best sensitivity and specificity values were for >4 curves (sens. 74%, spec. 72%) or for a TI>5.6 (sens. 55%, spec. 94%). These predictive values were confirmed after correction for potential confounders. Neither proximal LAD or proximal LCx number of curves or TI were related to FMD. There was no difference in areas of coronary arteries between FMD pts and controls, with the exception of LMCA (20.8±6.6 vs 17.9±5.8, p=0.002). Mean length was different between controls and FMD group (respectively LM 8.4±4.2 vs 9.8±4.5, p=0.022; LAD 117.8±28.6 vs 109.1±30.2, p=0.042; LCx 85.2±43.9 vs 62.9±31.4, p<0.001; RCA 104.2±24.4 vs 115.7±25.8, p=0.002). No coronary aneurysms were found in the cohort.

Conclusions

Distal and not proximal coronary arterial tortuosity is related to FMD. Coronary tortuosity defined as 4 distal LAD curves or a TI >5.6 are highly specific for FMD.

[1055] The impact of presence and extent of atherosclerosis in the left coronary artery on the dimensions of atherosclerosis-free left main coronary artery.

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Introduction

Despite severe clinical consequences of left main coronary artery (LMCA) disease, little is known about the natural history of atherosclerosis within this segment. There is no data if pathology in the distal coronary artery segments may lead to the remodelling or impaired vasodilatory motion of atherosclerosis-free LMCA.

Aim of the study

To assess the potential impact of peripheral atherosclerosis on the dimensions of athrosclerosis-free LMCA.

Materials and methods

Out of 2849 consecutive pts who underwent computed tomography angiography (CTA) between 2012 and 2014 we identified 940 pts without any signs of atherosclerosis in LMCA but with a varying degree of atherosclerosis disease in more distal left coronary artery segments (DLCAS). All the results were manually reviewed to exclude any signs of coronary atherosclerosis in LMCA. Patients were qualified into the following 7 groups: Group 1 - 200 pts with a lack of any signs of atherosclerosis, Group 2 - 442 pts with non-significant atherosclerosis narrowing the lumen of DLCAS up to 30%, Group 3 - 174 with borderline atherosclerosis narrowing the lumen of DLCAS from 30 to 70%, Group 4 - 70 with significant atherosclerotic lesions narrowing the lumen of DLCAS from 70 to 99%, Group 5 - 7 with presence of chronic total occlusion within DLCAS, Group 6 - 37 patients after coronary artery angioplasty and Group 7 - 10 patients after coronary artery by-pass surgery. Cross section maximal and minimal lumen areas (LA) and lumen diameters (LD) were measured and mean values were calculated.

Results

Overall, the patients with more advanced disease in DLCAS had more risk factors of the CAD (ie. mean age 49.6ŚĪ13.1 in Group 4 vs mean age 62.6ŚĪ9.3 in Group 1; p<0,01%; 23% diabetics in Group 4 vs 7% diabetes in Group 1; p<0.01) The study groups had significantly different dimensions of the LMCA (p<0.04 for LA and <0.05 for LD). The biggest LMCA LA and LMCA LD were found for patient with CTO in DLCAS. The results in respective groups are presented below: Group 1- 21.3ŚĪ6.5 mm2 for LA and 5.1ŚĪ0.8 mm for LD, Group 2 - 23ŚĪ8.9 mm2 for LA and 5.3ŚĪ1 mm for LD, Group 3- 21.3ŚĪ8.8 mm2 for LA and 5.1ŚĪ1 mm for LD, Group 4- 22.9ŚĪ10.2 mm2 for LA and 5.3ŚĪ1.1 mm for LD, Group 5- 32.8ŚĪ23.1 mm2 for LA and 6.1ŚĪ2.1 mm for LD, Group 6- 22.7ŚĪ7.3 mm2 for LA and 5.3ŚĪ0.9 mm for LD, Group 7- 17.7ŚĪ6.7 mm2 for LA and 4.7ŚĪ0.8 mm for LD.

Conclusions

Peripheral CAD has a significant impact on dimension of disease-free LMCA.

[1100] Extracorporeal membrane oxygenation therapy in severe COVID-19: a single-centre experience.

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Introduction

Covid-19 complicated by an acute respiratory failure presents a great therapeutic challenge. Temporary support with extracorporeal continuous membrane oxygenation (ECMO) has been used to provide patients with adequate oxygen supply and time to recover; however, its effectiveness has yet to be determined.

Aim of the study

The current report aims to investigate the patient's baseline profile and ECMO therapy outcome in the Centre for Extracorporeal Therapy in Warsaw, Poland.

Materials and methods

We collected data on ECMO therapy in the veno-venous configuration for acute pulmonary failure in the course of COVID19 in the period from March 20, 2020, until March 20, 2021. We examined the baseline patient profile (age, sex, comorbidities, course of the disease) and therapy result (death, discharge from hospital, or still under treatment). Patients were divided into those treated before and after November 2, 2020.

Results

During the analyzed period, 75 cases of ECMO therapy in COVID-19 patients were identified. Twenty-one (28.0%) were treated between March 20, 2020, and November 1, 2020, the remaining 54 (72.0%) after November 2, 2020. In 23 patients (30.6%), ECMO was used outside of CET, and the patients were transported thereafter. All patients had acute respiratory distress syndrome and required mechanical ventilation prior to ECMO implantation. Eighty percent of the patients were male. The mean age of the patients in the first group was 52.4 years, and 46.7 years in the second group. Ten patients (47.6%) died in the first group (while others were successfully discharged). As of March 29, 34 patients (65.4%) died in the second group; while twelve ECMOs were still there running. Four patients received a lung transplant.

Conclusions

Temporary veno-venous ECMO support should be considered in critically ill COVID-19 patients as our preliminary results suggest a reasonable survival. Given the high cost of treatment, more research is needed to determine which patients benefit the most, to increase survival, and avoid futile therapy.

Dentistry

Date:

Saturday, 29th May 2021, 11:00 AM

Jury:

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Polskie Towarzystwo Studentów Stomatologii

[767] The comparison of occlusal patterns and malocclusion disharmonies between children with Down Syndrome and healthy children

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Introduction

Down syndrome is one of the most common genetic disorders. Patients with trisomy of the 21st chromosome display a range of abnormalities of varying severity in the oral cavity, the stomatognathic system and the orofacial complex.

Aim of the study

The study aims to analyse and compare occlusion in children with Down syndrome in relation to healthy children in the same age group.

Materials and methods

The research material consisted of 22 children with Down syndrome and 33 healthy children unburdened by genetic defects, all aged 7-16. The extraoral examination included the analysis of facial features in relation to the sagittal, fronto-orbital and Frankfurt planes. During the intraoral examination the following features were assessed: Angle's and canine class, overbite, overjet, incisor retrusion / protrusion. Abnormalities concerning the structure and number of teeth as well as dysfunction of the tongue were analyzed. A functional examination was carried out in order to assess the tension of the mimic and masticatory muscles. We also conducted a questionnaire study to determine the general health of the patient. Statystical analysis using chi-squared test was performed with p-value <0.05 considered as statistically significant.

Results

The most common type of malocclusion among DS patients was bilateral partial crossbite - 59% vs 14% within the healthy group. A partial anterior openbite was also diagnosed more frequently (33% vs 5%). The prevalence of Angle class III was higher in children with Down syndrome (25% vs 15%). Incorrect overbite was observed in 68% of DS patients compared to 33% in the healthy group (p-value <0.013). 68% of DS patients exhibited incorrect overjet which was only observed in 37% of healthy patients (p-value <0.024). Hypodontia was diagnosed only among children with DS (50%). Muscular hypotonia occured in 55% of DS patients compared to 4% in the control group. Dysfunction of tongue muscles was also predominant in DS group (41% vs 6%) as well as infantile type of swallowing (74% vs 30%).

Conclusions

The study finds that there is a positive correlation between Down syndrome and the prevalence of various disharmonies in the stomatognathic system. They include malocclusion, teeth abnormalities concerning their number and structure, hypotonia of mimic and masticatory muscles and infantile type of swallowing. All of the above-mentioned abnormalities occur more frequently in children with Down syndrome compared to children unaffected by any genetic disorder.

[782] The concentration of fluoride in the saliva after application of fluoride using toothbrush in young adults

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Introduction

Fluoride is the foundation of preventive dentistry. Manufacturers of fluoride gels recommend mouth rinsing after gel application which reduces the concentration of fluoride in saliva. The number of studies in young adults is limited.

Aim of the study

The aim of the study was to examine to what extent mouth rinsing affects the retention of fluoride ions in saliva as compared to no rinsing after brushing teeth with fluoride gel.

Materials and methods

The study included 103 students, consisted of a survey and a clinical and laboratory examination of saliva. A single-blind, randomized, crossover design was used. The application of fluoridated gel was performed 2 hours after breakfast. After supervised toothbrushing for 2 min with Elmex Geele(Colgate Palmolive, dose 1cm) participants in Group A(n=52) were asked to expectorate all excess product for 30sec and in Group B(n=51) to rinse their mouths with 50ml of tap water. Saliva(5 ml) was taken into tubes 15 min after brushing. Fluoride determination was carried out with ion suppression ion chromatography.

Results

Each participant used toothpaste with fluoride daily, mostly 1450ppmF. Mean values of fluorine ion concentration before brushing: group A: 0.19ŚĪ0.38, group B: 0.08ŚĪ0.10, p: 0.044; after brushing: group A: 15.33ŚĪ14.73, group B: 6.19ŚĪ5.97, p=0.001. Average post-pre-emptive differences and p-value for comparison of groups A and B (based on t-test): group A: 15.5ŚĪ14.74, group B: 6.11ŚĪ6.00, p=0.000. The correlations between the fluorine concentration in saliva and the daily use of fluorine pastes and between the consumption of food products with high fluorine content were proved to be statistically insignificant.

Conclusions

A higher concentration of fluoride in saliva occurs after fluoridation without rinsing the mouth. Discontinuation of rinsing after fluoridation results in a higher concentration of fluoride in saliva, which makes these preparations more effective. Demonstrating this dependence may be a basis for changing the manufacturers' recommendations on using gels and requires further research.

[897] Evaluation of computed tomography based measurements, symptoms and treatment results in patients with orbital floor fractures

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Introduction

In orbital floor fractures only the orbital walls are affected, without involvement of the orbital rim. The medial wall of the orbit is also frequently affected. The characteristic symptoms include diplopia, infraorbital nerve paraesthesia and enophthalmos. For the diagnosis and assessment the method of choice is computed tomography imaging (CT).

Aim of the study

The aim of the study was to evaluate the connection between parameters gathered by means of computed tomography and the clinical presentation and treatment results in patients suffering from orbital floor fractures.

Materials and methods

The study included 40 patients suffering from orbital floor fractures. Using their medical records information regarding selected symptoms has been gathered. Following CT-based parameters have been assessed:

I - largest length of the fracture in the sagittal plane (FL),
II - distance between the end of the fracture and the infraorbital margin (MEF),
III - distance between the infraorbital margin and the end of the orbit (MEO),
IV- whether the fracture includes the medial wall of the orbit (MWI),
V - relation between the fracture and the infraorbital nerve (INI),
VI - largest width of the fracture in the coronal plane (FW),
VII - size of the hernia into the maxillary sinus (HMS),
VIII - position of the fractured bone fragments (FBP),
IX - displacement of rectus inferior muscle (RID).

The approximate area of the fracture (AOF) and the distance between the end of the fracture and the end of the orbit (EFO) have been calculated. The follow-up of 30 patients has also been analysed. The results have been statistically evaluated.

Results

The statistical evaluation has proved that there is a connection between the fracture of the medial wall of the orbit and the absence of asymmetrical eye placement. It has also, among others, proved that the area of the fracture was significantly smaller in patients with a disfunction of the infraorbital nerve, patients suffering from diplopia after treatment, patients suffering from diplopia after surgery, patients in which diplopia did not disappear after treatment and patients in which diplopia did not disappear after surgery.

Conclusions

The genesis of symptoms in orbital floor fractures seems complex. Small area of the fracture could be a negative prognostic factor.

[919] An analysis of patients with mesiodens

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Introduction

Mesiodens is a supernumerary tooth located in the midline, between the two medial incisors. The etiology is not clear. The mesiodense may cause delayed or ectopic eruption of permanent incisors, crowding of the teeth, occurrence of cysts and other pathologies requiring surgical and orthodontic treatment.

Aim of the study

The aim of the study was the evaluation of data regarding patients treated surgically due to the mesiodens.

Materials and methods

The study has been conducted retrospectively. Medical documentation of patients treated surgically between 2017 and 2021 has been evaluated. Those having the mesiodens have been selected. Data regarding the patient's age, sex, and number of supernumerary teeth, as well as the surgical approach and duration of the procedure has been gathered. The results have been evaluated by means of descriptive statistics.

Results

Between 2017 and 2021, 26 patients were treated surgically due to mesiodens, located in the maxilla. There where 19 males and 7 females. The patients were between 6,9 and 17,5 years old. The mean age was 10,8 years. In 19 patients the mesiodens was singular, however the remaining 7 had two of them. For the surgical removal of the mesiodens palatal approach was used in 14 cases and the vestibular in 12 cases. The average duration of surgery was 31 minutes.

Conclusions

The mean age of patients treated surgically because of a mesiodens that were included in the study was 10,8 years, which is the moment after the proper eruption time of maxillary incisors. After the diagnosis is established, treatment consisting of the surgical removal of the mesiodens is the method of choice.

[967] The Attitude of Polish Dentists towards Children Treatment

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Introduction
The dentists' attitude towards Children Treatment is one of the factors affecting the success of pediatric dental treatment.

Aim of the study
The aim of the study was to present the attitude of dentists towards Children Treatment.

Materials and methods
A questionnaire survey was conducted among 736 dentists and consisted of 46 questions about premedication, adaptive and prophylactic visits, methods of treatment, attitude and impact on the child's behavior in the office, used behavioral methods, approaches to non-cooperating patients. Data were analyzed using descriptive statistics and the Spearman test (p>l0.15l).

Results
For the analysis 577 surveys were qualified. The average age was 33 (±8.2) years. Premedication was used by 16.7%. Disabled patients were treated by 60.5% of respondents. Only 17.8% used caries risk assessment questionnaires. Independent adaptation visits were conducted by 70.5%. Almost all performed prophylaxis, more often including treatment (59.5%). Glass-ionomer cement was most frequently used for restoration of primary teeth. Primary teeth were treated endodontically by 41.3% and young permanent teeth by 65.4%. As many as 72.3% of dentists made their attitude to a patient dependent on the style of parents' upbringing and chose on this basis methods of shaping the dental approach. About 65% of dentists used behavioral methods. Non-cooperating children were treated by 16.7%. To immobilize the child, 4.5% of dentists asked for dental assistance, and 35.6% for the parents' help. According to 84.9%, it was possible to overcome dentophobia through adaptation visits.

Conclusions
Most of the dentists treat children, including the youngest and disabled children, and proceed with prophylactic treatments. A premedication is used by a minority. Glass ionomer cement is the most popular material for reconstruction. Every second doctor immobilizes a child asking parents for help. It is possible to overcome dentophobia through adaptation visits.

[1116] Comparison of patients' satisfaction with Vacuum-formed retainers and Hawley retainers

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Introduction
Relapse occurs in about 70% of patients after orthodontics treatment. The retention phase is required to prevent relapse in teeth alignment and intra-arch relationships after orthodontics treatment. Vacuum-formed and Hawley are common clinically used retainers in the post-orthodontic treatment phase to prevent relapse in teeth alignment and intra-arch relationships.

Aim of the study
There is a relationship between retainer compliance and patient satisfaction in the comfortability of retainer. Therefore, this study aims to compare patient satisfaction with Vacuum-formed retainers (VFRs) and Hawley retainers (HRs) by mentioning the retainer duration of use and compliance, and time survival on the retention phase.

Materials and methods
192 orthodontic patients (77 Hawley, 115 VFR) in the retention phase after a fixed orthodontic treatment participated in this study. The participants filled out a validated questionnaire. The questionnaire contained nine different sections to compare the patients' satisfaction with VFR and HR. the questionnaires were either emailed to the participants or were filled out by one researcher.

Results
VFR's characteristics such as comfortability of use, preference to be used over fixed appliances, and retainer's color alteration were significantly more than Hawley retainer. Patients who used VFR experienced fewer appointments for the recall visits. Hawley showed significant results over Vacuum-formed retainer in features like duration of retainer use in hours, retainer breakage, difficulty in use, retainer's fitness, speaking difficulty, and embarrassment caused by wearing the retainer.

Conclusions
This study results showed that there is more satisfaction with VFR over HR in most of the studied factors.

[1117] A quantitative evaluation of tooth surface roughness after polishing with Prophy paste CCS: an in-vitro study

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Introduction

Scaling and root planning are routine procedures in dental care. The root surface microscopic analysis has shown increased surface roughness as well as some plucked dentine areas after scaling and root planning. This roughness enhances the bacterial colonization process, which intern accelerates dental plaque formation. Polishing is used to diminish the roughness impact. Although polishing is a very common practice in dentistry, there is a lack of reliable information on its impact on tooth surface roughness.

Aim of the study

This study aims to evaluate tooth surface roughness after polishing with Prophy paste CCS in vitro.

Materials and methods

40 extracted human premolar teeth samples were used in this study. These samples were divided into two groups of enamel surface and root surface with 20 teeth in each of them. Each group was divided into four subgroups for the polishing procedure:1- rubber cup with paste and water, 2-rubber cup with paste only, 3-rubber cup with distilled water only, and 4-rubber cup only without paste or water. First, samples were scaled by piezoelectric, and the primary roughness average (Ra) was measured by an Atomic force microscope. Then, the samples were polished with Prophy paste CCS, and the secondary Ra was measured. The primary and secondary teeth roughness average was compared.

Results

The enamel surface roughness was decreased after polishing with prophylaxis paste (with or without water). Using only the paste for polishing increased the roughness of the root surfaces.

Conclusions

Considering this study's limitations, it seems that using the prophylaxis paste with water for polishing is more effective in reducing enamel surface roughness than the surface roughness of the root surface. It is better to use various pastes with or without water and surface requirements (supra or subgingival) with caution.

Gynecological Case Report

Date:

Sunday, 30th May 2021, 8:30 AM

Jury:

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dr hab. n. med. Barbara Grzechocińska
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Coordinators:

Natalia Karpowicz
Michał Kośnik

[776] 46 XY, Female: Complete androgen insensitivity syndrome: a case report.

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Background
Androgen insensitivity syndrome (AIS) is an inherited disorder of sexual development caused by mutations in the androgen receptor encoding gene.

Case Report
A female patient born in 1984, weighing 68 kg and measuring 171 cm, at the age of 17, was diagnosed with complete androgen insensitivity syndrome, during the diagnosis of primary amenorrhea. She was assigned grade 7 in the Quigley scale. Cytogenetic analysis showed a 46 XY karyotype. Gynecological examination revealed a blind ending vagina and a lack of uterus. Physical examination revealed normal breast development and scanty pubic and axillary hair. The patient kept seeing herself as a woman. At the age of 18, the patient underwent laparoscopic gonadectomy. Before the surgery, the testosterone level was 5.6 ng/ml, and after 0.6 ng/ml. Macroscopic histopathological examination of the gonads revealed a cyst and many lumps. Microscopic evaluation has suggested a tubular adenoma. After the procedure, the patient was under medical supervision and was taking orally 1 mg of estradiol daily. At the age of 24 patient was diagnosed with osteoporosis, T-SCORE was -2.6 SD, later in 2012 -2.76 SD. The patient received sodium alendronate and ibandronic acid. At the age of 34, the patient was diagnosed with type 2 diabetes, treatment with metformin and continued diabetes care was ordered. The level of FSH was 35.50 mlU / ml, and LH was 13.05 mlU / ml. The patient is under hepatological control due to the elevated level of ALAT (HBV and HCV were excluded).

Conclusions
Quigley grades 6 and 7 correspond to complete androgen insensitivity. The genitals are completely feminized, and newborns at birth are assigned as females. The diagnosis is usually established during the diagnostics of primary amenorrhea. CAIS is associated with high risks of gonad carcinogenesis and therefore a gonadectomy must be performed. Hormone replacement therapy (HRT) is required after gonadectomy in order to maintain secondary sexual characteristics. Due to the high risk of osteoporosis patient requires calcium and vitamin D supplementation and bone density control. The prognosis is good, and gonadectomy and HRT usually give satisfactory long-term results.

[787] Selective fetoscopic laser ablation for twin-to-twin transfusion syndrome treatment in dichorionic triamniotic triplets

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Background

Twin-to-twin transfusion syndrome (TTTS) is a specific complication of multiple pregnancies. This condition is a result of an intrauterine blood transfusion from one twin (donor) to another twin (recipient) through connecting blood vessels within their shared placenta. The only pathogenetic method of TTTS treatment is a fetoscopic laser photocoagulation of placental anastomoses. There are three possible variations of the specified technique: selective, non-selective and Solomon technique. Nowadays method of choice of TTTS treatment is the selective fetoscopic laser ablation (FLA). The key moment of operation is the coagulation of all anastomoses that not always managed to be reached.

Case Report

A 32-year-old woman gravida 3, para 2, with a triplet pregnancy was referred to the hospital at 17-18 weeks of gestation. Ultrasonic examination revealed the dichorionic triamniotic triplets and TTTS stage II. Selective FLA with the Solomon technique was performed at 17-18 weeks of gestation. One large and four small arteriovenous anastomoses were found. 500 mL of fluid was evacuated during the procedure. Ultrasound monitoring after operation showed no pathologies. The postoperative period was without complications. Follow-up ultrasound examinations demonstrated positive dynamics. The patient was discharged. At 33-34 weeks the patient was hospitalized with preterm premature rupture of membranes. C-section was performed: the first, the second and the third neonates weighted 1910 g, 1810 g, and 1700 g, respectively. After delivery, children were transferred to the NICU. The patient was discharged on the fifth day after the operation.

Conclusions

TTTS is one of the most dangerous complications of multiple pregnancies. The only pathogenetic method of treatment is FLA. This procedure can have no success because of the presence of residual anastomoses, which can cause twin anemia-polycythemia sequence (TAPS) and recurrent TTTS. In this case, a selective FLA with Solomon technique was used with a good outcome: all three fetuses survived. Postpartum examination of the placenta did not reveal any residual anastomosis.

[816] Diastrophic dysplasia - from 1st trimester ultrasonographic prenatal diagnostics to perinatal pathologist report with post mortem imaging - a case report

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Background

A diastrophic dysplasia is an extremely rare (1/500000 pregnancies) skeletal dysplasia inherited in autosomal recessive way, caused by mutation in SCL26A2 gene. It is characterized by significant shortening of all long bones with preserved normal neurodevelopment.

Case Report

35 y.o. woman with unremarkable family history for congenital anomalies, came for prenatal diagnostics in 12 6/7 week of gestation. An ultrasonographic examination revealed NT=1,2 mm and normal additional markers (low-risk of trisomy 21, 18 and 13 in FMF report). Cff-DNA examination was carried out at patient's request (negative result). Due to abnormally bent, moveless, shortened limbs check-up ultrasonographic examination in 2-3 weeks was recommended.

In 15 5/7 the following abnormalities were confirmed: both-sided extreme limbs' long bones shortening (<5 centile), abnormally bent limbs, practically moveless. Additionally, hitchhikers thumbs, clubfeet with deviated toe and micrognathia were revealed. A suspicion of diastrophic dysplasia was placed. The patient was directed for a genetic consultation followed by amniocentesis in 16 6/7 (in cytogenetic test - normal male karyotype). A molecular test was adequately directed and confirmed an initial diagnosis.

Parents made a decision about pregnancy termination after genetic consultation. In 21 0/7 a miscarriage was pharmacologically induced. A fetus with placenta were referred to a perinatal pathologist. In performed post mortem babygram an extreme (<5 centile) symmetrical limbs' shortening were confirmed. In macroscopic exam clubfeet was diagnosed and both-sided: toe deviation and hypoplasia of 1st metacarpal bone. Macrocephaly, extreme micrognathia, cleft soft and hard palate, left radial campomelia were also detected. In microscopic examination of long bones, lumbar section of spine and ribs II-V a smaller amount of extracellular substance with secondary mucosal transformation and minor-cystic changes without accompanying disorders of growth plates architecture were diagnosed consistent with diastrophic dysplasia.

Conclusions

A standardized 1st trimester sono examination remains an integral part of a modern prenatal diagnostics, fundamental in detecting of structural defects. Interdisciplinary diagnostic cooperation allows the earliest detection of fetal defects. A perinatal pathologist's examination objectifies and expands ultrasonographic diagnostics in terms of structural disorders.

[838] Chemotherapy of triple-negative breast cancer in a pregnant patient - a case report

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Background
Female breast cancer (BC) is currently the most frequent malignancy worldwide. Triple negative BC (TNBC), which lacks the expression of estrogen and progesterone receptors and overexpression of HER2 receptor, is a BC subtype with the least favourable prognosis and limited treatment options. Pregnancy-associated BC (PABC), defined as BC diagnosed during pregnancy or within 1 year after giving birth affects 1/3000-10000 pregnant women, 23% being TNBCs. PABCs are usually diagnosed after 2-7 months after first symptoms appear and thus tend to be more advanced at diagnosis than not-PABCs. In this report we present a case of a 10-weeks pregnant patient, who received a successful TNBC-related chemotherapy, surgical treatment and radiotherapy with no effect on developing pregnancy.

Case Report
A 32-year-old, 10-weeks pregnant woman was diagnosed with stage IIB TNBC with BRCA1 mutation. At week 13 of pregnancy and stage IIIA tumor she initiated neoadjuvant chemotherapy treatment with four cycles of adriamycin and cyclophosphamide (AC) and 12 cycles of paclitaxel and carboplatin. The pregnancy was controlled throughout the process and no abnormalities were found. After 5 months from receiving the first chemotherapy cycle the patient gave birth to a healthy child via Cesarean Section. Then she underwent mastectomy of the affected breast and radiotherapy. To date, the patient and the child remain alive and well with no disease recurrence observed in the woman.

Conclusions
Less than 5% of malignancies occur in pregnant patients and due to increasing average age at pregnancy the rate can be expected to increase. Pregnancy-related cancers can be successfully treated with no impairment to the fetus according to available recommendations. However, currently, PABCs remain diagnosed later than other BCs. Raising awareness of the issue and safe treatment options among medical professionals, as well as encouraging further cooperation between obstetricians and oncologists is crucial. This report is an example of a successful, chemotherapy-based treatment of TNBC during pregnancy that had no effect on its development. It is also an opportunity to highlight experts' recommendations regarding cancer treatment during pregnancy.

[858] Deep infiltrating endometriosis imitating intestinal tumor in a woman of reproductive age

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Background

Endometriosis is a condition in which an endometrium-like tissue is present outside the uterus. The disease is estimated to affect 6-15% of reproductive-age women. Typical symptoms of endometriosis include dysmenorrhea, dyspareunia, chronic pelvic pain, dysuria and infertility. The latter symptom affects even 35-50% of women suffering from endometriosis.

Case Report

We report a case of a 32-year old woman suffering from deep infiltrating endometriosis. The patient had reported dysmenorrhea since she was 14. She was treated with oral contraception (OC) due to persistent pelvic pain. In September 2017 she decided to conceive and withdrew OC, which resulted in aggravating dysmenorrhea and dyspareunia. Since May 2018 she had started having recurrent, rupturing cysts and intestinal problems: weight loss, blood in the stool. In December 2018 she was admitted to the hospital with severe pain in the abdomen. Colonoscopy revealed a swelling of the large intestine with a significant stenosis in the distal part of the sigmoid causing the symptoms of bowel obstruction. Endometriotic tissue was found in the histopathological examination from the biopsy. While awaiting surgical procedure the patient decided to collect and freeze her oocytes to preserve fertility. Surgical treatment of gastrointestinal endometriosis was performed in March 2019 - rectal resection and excision of an endometrially changed fragment of the left ovary were performed. Histopatological examination revealed endometriosis infiltrating the intestinal wall. After recuperation tubal patency was checked in August 2019 and she started trying to conceive on her own for six months (right oviduct properly patent). In February 2020 she was qualified for an operation due to the suspicion of 8 cm right hydrosalpinx. The tumor appeared to be a benign cystic mesothelioma. Due to the long history of infertility the woman was finally qualified for IVF in March 2020, prior to which she finally conceived spontaneously. The pregnancy was uneventful. She delivered via cesarean section at 40 weeks of gestation due to lack of progress in the 1st stage of the delivery. The female newborn of 3120g was born in good general condition. Currently, the patient is breastfeeding and does not report any symptoms.

Conclusions

An early diagnosis and proper implementation of an individualized treatment of endometriosis can prevent long-term consequences of the disease, especially in case of deep infiltrating type.

[906] Pregnancy complicated by the rupture of a massive splenic cyst: a case report

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Background
Splenic cysts are a rare disorder diagnosed during pregnancy and currently only fourteen cases have been reported.

Case Report
A 27-year old nullipara was referred to the haematologist at 26 weeks of gestation due to thrombocytopenia. An asymptomatic splenic cyst of 21x15cm was diagnosed on ultrasound. She was qualified for an operation at that time, but she did not give the consent. During an on-line appointment she reported a two-week episode of fatigue and fever, but did not come to the clinic. A few days later she was admitted to the perinatal unit with severe abdominal pain at 32 weeks of gestation. On admission: WBC 15.5, CRP 94; procalcitonin 2,17; HGB 11.4. On ultrasound the presence of a splenic cyst was confirmed, surrounded by a large amount of echogenic fluid in the abdominal cavity. Due to an acute peritonitis and deterioration of general condition she was qualified for an immediate surgery. On 13th of April 2021 median laparotomy was performed with simultaneous caesarean section and splenectomy. 2000ml of greenish-purulent fluid was present in the abdominal cavity. Male newborn was delivered in serious general condition (1 and 6 points in Apgar scale in 1st and 3rd minute). A ruptured splenic abscess was confirmed during surgery and total splenectomy was performed. The patient revealed septic symptoms in the postoperative period and was treated with tazobactam, metronidazole, fluconazole and nadroparin. 4 units of packed red blood cells and fresh frozen plasma were transfused. Due to continuously elevated CRP and WBC meropenem was administered 10 days after the surgery. She is continuing her treatment in the perinatal unit and her general condition is improving.

Conclusions
Splenic cysts should be operated on during the second trimester of pregnancy. The risk of spontaneous splenic cyst rupture is greater as the gestation progresses, which may complicate perinatal care and lead to preterm delivery with all its consequences.

[930] Diagnosis and management of complete androgen insensitivity syndrome in a young woman presented with primary amenorrhea

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Background

Complete Androgene Insensitivity Syndrome (CAIS) is a rare disorder of sex development that affects 1 to 5 per 100 000 individuals with 46, XY karyotype. CAIS is caused by mutations in the androgene receptor gene located on X chromosome in the Xq11-q12 region, which lead to complete resistance to the action of androgens in human tissue. Despite the 46, XY karyotype, the disorder triggers the development of a female phenotype.

Case Report

A 17-year-old female patient presented with primary amenorrhea was admitted to the Clinic for examination. The patient had no significant previous medical history. Gynecological examination showed hypoplastic vulva as well as blind-ending vagina approximately 3cm in length. Transabdominal USG was conducted and the left, 20x19mm in size, residual gonad was detected. Breast USG detected no deviations. Blood tests revealed elevated levels of LH, FSH and testosterone whereas estradiol level was within the reference value. Genetic test demonstrated a 46, XY karyotype. The patient was diagnosed with CAIS and underwent laparoscopy. During the surgery enlarged residual gonads with smooth surface as well as overgrown fallopian tubes were identified and resected. Histopathologic report of lesions revealed the presence of testicular tissue with Sertoli and Leydig cells, partially in the form of encapsulated nodules and partially dispersed. Serous cysts, musculo-tubular structures and scattered smooth muscle fibers were found as well. In addition, immature structures suggesting the possibility of residual epididymis were reported. After bilateral gonadectomy the blood test revealed elevated levels of LH and FSH, while testosterone and estradiol levels were within reference range. The patient started Hormonal Replacement Therapy (HRT) with estradiol monotherapy.

Conclusions

The most common presentation in women with CAIS is primary amenorrhea, while in prepubertal girls it is an inguinal hernia. Bilateral gonadectomy should be performed after adolescence, because the presence of the testes keeps estrogen at a normal female level which enables breast development and spontaneous puberty. After gonadectomy, HRT is necessary to stimulate and maintain secondary sexual characteristics, psychosexual development and to maintain bone mineral density. Since CAIS affects gender identity, a psychological issue, taking a multidisciplinary approach to the treatment is essential to give the patient best possible result.

[933] Prenatal limb ischemia as a complication of twin-to-twin transfusion syndrome - a case report

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Background
Twin-to-twin transfusion syndrome (TTTS) is one of the complications of monochorionic twin pregnancies, with the incidence rate of 10-15%. It is associated with high incidence of fetal cardiovascular and neurological complications and mortality rate, if left untreated. One of the rare complications of the syndrome is prenatal limb ischemia that occurs approximately in 0.5% cases. The pathogenesis of the limb ischemia remains unclear; however, it might be related to polycythemia/hyperviscosity and vasoconstriction, that occur in pregnancies complicated with TTTS. Nevertheless, limb ischemia is thought to be unrelated with any prenatal invasive interventions.

Case Report
We present a case of a 28-year-old multiparous woman, that was admitted to the 1st Department of Obstetrics and Gynecology, Medical University of Warsaw with TTTS (Quintero stage 1) diagnosis at 22 weeks of gestation. The patient was qualified for fetoscopic laser photocoagulation (SLP). Due to poor visibility SLP failed and the patient had in the following weeks four amnioreduction procedures. At 28 weeks of gestation due to twin anemia-polycythemia sequence (TAPS) diagnosis the patient was qualified for cesarean section. Twin I (the recipient twin) birth's weight was 1340g with an Apgar score of 7/8 at 1 and 5 minutes. Twin II (the donor twin) birth's weight was 1240g with an Apgar score of 5/8 at 1 and 5 minutes. Postnatally, the donor twin was diagnosed with an ischemia of the right lower limb. The necrotic limb was amputated 2 days later with an uncomplicated recovery. The ischemic injury was qualified as a complication of the main condition - TTTS.

Conclusions
In utero limb ischemia is a severe complication of TTTS. Thus, neonates and obstetricians should be aware of this complication and before any treatment inform the patients about potential in utero limb injury in TTTS complicated twins. However, further research is needed to reveal the mechanism of the ischemic limb injury in monochorionic twin pregnancies complicated with TTTS.

[996] Successful pregnancy in a patient with paroxysmal nocturnal haemoglobinuria, severe thrombocytopenia and pregnancy induced hypertension

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Background
Paroxysmal nocturnal haemoglobinuria (PNH) is a rare acquired clonal disorder of hematopoietic stem cells caused by a somatic mutation in the PIG-A (phosphatidylinositol glycan class A) gene. It can manifest with haemolytic anaemia, haemoglobinuria, bone marrow failure and thrombosis. During pregnancy, PNH is associated with an increased maternal and fetal mortality and morbidity. Complications can occur in at least half of the pregnant women. Many pregnancies end prematurely or result in spontaneous miscarriages and only a small percentage of women deliver vaginally.

Case Report
We present a case of a pregnant woman with PNH and severe thrombocytopenia treated with eculizumab who developed the pregnancy induced hypertension (PIH) in the 3rd trimester gestation. She was admitted to our hospital at 32 weeks gestation with a 7-day history of high blood pressure for observation. On admission, a complete blood count revealed anaemia and severe thrombocytopenia. The patient required a total of 2 units of platelet concentrate and 1 unit of packed red blood cells during the whole hospitalization. Her blood pressure remained high (150/95 mmHg on average) despite the initiation of treatment with methyldopa and amlodipine. At 34 weeks gestation it was decided to expedite delivery in light of recurring reductions in the fetal heartbeat. The patient underwent an emergency caesarean section under general anaesthesia and with no surgical complications a male infant was born. After the caesarean section, the patient required an oral iron supplementation and the red blood cell transfusion due to the reduction in haemoglobin concentration. Methyldopa and amlodipine were continued postpartum and metoprolol was added. Nevertheless, the blood pressure still remained high. On the 13th day postpartum, the patient was discharged on her own request.

Conclusions
Pregnancy with PNH is associated with a higher risk of thrombosis, haemorrhage as well as maternal death, miscarriage, and premature delivery. Management of such a pregnant patient often remains a challenge for physicians. However, with appropriate treatment, regular monitoring of the patient and judicious use of blood transfusions, a successful outcome for both mother and fetus can often be predicted.

[1008] Hemolytic disease of the fetus and newborn treated with multiple intrauterine transfusions

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Background

Hemolytic disease of the fetus and newborn (HDFN) is a potentially life-threatening state, characterized by maternal synthesis of alloantibodies against fetal antigens. In the majority of cases, antibodies are directed against fetal antigens of Rh blood system. Antibodies cross the placental barrier and bind fetal red blood cells leading to its' destruction and subsequent hemolysis. As the result, fetus is endangered by hemolytic anemia, chronic hypoxia and severe damage to tissues and organs. At present, severe cases of HDFN are treated by intravascular transfusion via the fetal vein.

Case Report

We present a case of 43-year-old patient, who was under observation during 5th gestation to 3rd labor due to the risk of HDFN as a result of anti-D antibodies. At 18th week of the gestation due to elevated velocity of the flow in fetal middle cerebral artery (PSV MCA = 1,52 MoM), patient was qualified for intrauterine transfusion. The titer of anti-D antibodies was determined significant. At the time of the transfusion, fetal hemoglobin (Hg) level was at 8,4g/dl. 11.0 ml packed red blood cells were transfused and Hg level at the end of the procedure was found to be at 14.8g/dl. Due to recurrent fetal anemia, further intrauterine transfusions were performed. Total of 11 packed red blood cells transfusions were necessary, and the average interval between procedures was 10.9 days, whereas the shortest interval was 7 days.

The total of 429 ml packed red blood cells were transfused. Mean hemoglobin levels before the procedures was 9.15g/dl (lowest Hg level=4.20g/dl). Mean hemoglobin level after procedures was 13.7g/dl. Last intrauterine transfusion was performed 13 days before labor. At 36. weeks of gestation cesarean section was performed due to the risk of neonatal asphyxia and previous cesarean delivery. Live, premature, 2930 g and 52 cm female neonate was born. Apgar score was 10-10-10.

Conclusions

Presented case report is an example of importance of early, fast and effective identification of maternal alloimmunization, especially in multiparous women with burdened obstetrics history. Diagnosis of HDFN needs close supervision with repeated MCA-PSV assessment and sonography, this allows for an early diagnosis of fetal anemia and other serious complications associated with it. Intrauterine blood transfusions are regarded as lifesaving procedures and can be repeated several times during gestation period in case of recurrent fetal anemia.

[1046] Intrauterine growth restriction with idiopathic anaemia in fetus: a case study

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Background

Intrauterine growth restriction (IUGR) is the most common cause of low birth weight, which can lead to higher risk of perinatal death and greater morbidity in the future. Hypotrophy is recognised during an ultrasound (USG) examination when fetal weight is under 10th percentile in relation to a week of gestation. There are many factors that may contribute to this pathology but the reason can be also idiopathic.

Case Report

A 34-years old woman in her 3rd pregnancy, to 2nd delivery, was admitted to the 1st Department of Obstetrics and Gynaecology MUW due to early intrauterine growth restriction (452g, 0,3 percentile) diagnosed in 24+6/7 week of pregnancy during ultrasonography examination. In her medical history she had a caesarean section. She had been treated for thyroid insufficiency. In 25th week of gestation cordocentesis was performed and the blood samples were sent for further diagnosis of fetal cariotype, TORCH PCR, morphology and fetal blood type. aCGH test found deletion on 17th chromosome (del 17q12). Due to anaemia of the fetus (Hb 8 g/dl) four blood transfusions were performed, the first one in 25+6/7 week, the last one in 32th week of pregnancy, when estimated haemoglobin level was 13,9 g/dl. Test for the presence of anti-D antibodies was negative, so serologic conflict was excluded. Tests for toxoplasmosis, parvovirus B19, CMV infections were also negative. The blood flow in arteries: uterine, umbilical and medial cerebral evaluated by Doppler USG was within normal limits as well as cerebrospinal ratio. However, the fetus was still weighing 1211g in 34th week (0,1 percentile). Amniotic fluid was evaluated during all control USG visits and it was always within normal limits. No anatomical abnormalities were found in all USG examinations. The weight of the fetus was estimated on the basis of the length of long bones, head circumference and abdominal circumference, which were always below the lower limit. The caesarean section was performed in 35th week because of the risk of intrauterine fetal asphyxia. A born girl got Apgar scores of 9-9, weighing 1610g.

Conclusions

The presented case shows that in spite of the newest methods and wide range of diagnostics, finding the cause of various fetal disorders, like hypotrophy or anaemia is very difficult. This is why more research should be done to find the unknown reasons of these conditions.

[1115] Delayed gonadectomy in patient with Swyer syndrome - a case report

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Background

Swyer Syndrome is caused by abnormal sex differentiation during embryonic development. It affects people with the 46,XY karyotype and female phenotype. Diagnosis is make usually in adolescence because of delayed puberty and amenorrhea. In this syndrome high frequency of tumors such as gonadoblastoma or dysgerminoma was reported. It is considered that the frequency of neoplasm increases as the patient ages. Because of the risk, it is recommended to perform bilateral gonadectomy as soon as the diagnosis is made.

Case Report

An 18 years old female presented with amenorrhea and poorly developed secondary sexual characteristics in December 1989. On general examination, she was 169 cm high, 72 kg weight and her body mass index (BMI) was 25,21 (kg/m2). In 1990 a karyotype study confirmed the presence of the 46, XY genotype and diagnosis of the Swyer syndrome. Since the age of 19, she was prescribed hormone replacement therapy (HRT) which caused an appearance of menarche. Since that time she had scanty but regular bleedings. In the check-up ultrasound examination dimensions of the uterus were decreased and gonads were vestigial. Breast development was assessed as stage 1/2, while pubic hair growth was described as stage 4 on Tanner scale. The successful gonadectomy was performed in 2007, 17 years after the diagnosis. The patient had refused the proposed treatment before that time. Histopathological examination confirmed the absence of neoplasm. In follow-up ultrasound examinations there were no signs of any disturbing changes. In 2009 the patient was admitted to the clinic because of HRT intolerance. Levels of follicle-stimulating hormone (FSH) and luteinizing hormone (LH) remained increased during the break in HRT (FSH 79.35 IU/l and LH 34,62 IU/l. The oral glucose tolerance test showed increased levels of glucose (97 mg/dl; 146 mg/ml after 2 h). She continued the treatment with HRT composed of estradiol and dydrogesterone (1 mg, 10 mg, q.d.) and with metformin (850mg, t.i.d.). In 2020 hormone levels were normal and the patient had good control of her glucose levels.

Conclusions

Our patient underwent gonadectomy 17 years after the diagnosis and she did not develop cancer. We emphasize the need of performing the gonadectomy as young as possible. It is crucial to avoid the risk of tumor development. However, the case suggests an influence of other factors than the presence of dysgenetic gonads and age on tumor development.

Infectious Diseases & COVID-19

Date:

Saturday, 29th May 2021, 2:30 PM

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[810] Preventable risk factors for Toxoplasma gondii infection among Polish pregnant women - preliminary results

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Introduction

Toxoplasmosis is a cosmopolitan distributed protozoan parasite infection, caused by Toxoplasma gondii (TG). The infection is usually acquired during childhood and adolescence. One third of the general population may be infected with TG and the incidence varies across the countries. Recent studies indicate that almost 2% of pregnant women might present an acute TG infection. In case of primary infection during pregnancy, the parasite can be transmitted across the placenta, causing congenital toxoplasmosis, which is associated with birth defects (chorioretinitis, intracranial calcifications and hydrocephalus).

Aim of the study

The aim of the study was to assess the risk factors for TG infection during pregnancy. The analysis of recommended screening tests implementation towards other congenital infections was also performed.

Materials and methods

Medical charts of all women with suspected TG infection admitted to the Department of Children's Infectious Diseases between 1st December 2019 till 14th March 2020 were collected. Data on risk factors for TG infection and screening tests for other vertical infections were evaluated. TG infection was verified by serological assessment of IgM, IgG titers and IgG affinity tests.

Results

The study group included 88 pregnant women with suspected TG infection, with median age of 30 years (range: 16-41). The primary TG infection was confirmed in 31/88 (35.2%) women. In 34/88 (38.6%) the infection occurred in the past. In 18/88 (20.5%) the diagnosis was excluded. Inconclusive results totalled 5/88 (5.7%). In 55/88 (62.5%) cases the recommended testing towards vertically transmitted infections was carried out correctly. History of miscarriage was more often in patients with TG beside patients without any infection or with the infection in the past (9/31, 29% vs. 1/18, 5.6% vs. 2/34, 5.9%, p=0.01). Women with TG more often lived in a rural area and had the recommended testing scheme carried out correctly versus patients who had never had toxoplasmosis, (respectively 18/31, 58.1% vs. 1/18, 5.6%, p=0.04; 20/31, 64.5% vs. 10/18, 55.6%, p=0.03). More women with TG had been the caregivers to wild cats versus women that had never been infected (15/31, 48.4% vs. 3/18, 16.7%, p=0.03).

Conclusions

Preventable risk factors for TG infection during pregnancy include habitation and caregiving to wild cats. Women with confirmed TG more frequently lived in rural areas and more likely were caring of wild cats. The history of miscarriage was more common in women with confirmed TG infection.

[890] Complement hyperactivation is associated with immune dysregulation and thrombotic microangiopathy in COVID-19 patients with greater disease severity on admission

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Introduction
Complement system hyperactivation has been proposed as a potential driver of adverse outcomes in severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infected patients, given prior research of complement deposits found in tissue and blood samples, as well as evidence of clinical improvement with anticomplement therapy. Its role in augmenting thrombotic microangiopathy (TMA)-mediated organ damage has also been implicated in coronavirus disease 2019 (COVID-19).

Aim of the study
This study aimed to examine associations between complement parameters and progression to severe COVID-19 illness, as well as correlations with other systems.

Materials and methods
Blood samples of COVID-19 patients presenting to the emergency department (ED) were analyzed for a wide panel of complement and inflammatory biomarkers. The primary outcome was COVID-19 severity at index ED visit, while the secondary outcome was peak disease severity over the course of illness.

Results
Fifty-two COVID-19 patients were enrolled. C3a (p=0.018), C3a/C3 ratio (p=0.002), and sC5b-9/C3 ratio (p=0.021) were significantly elevated in with severe disease at ED presentation. Over the course of illness, C3a (p=0.028) and C3a/C3 ratio (p=0.003) were highest in the moderate severity group. In multivariate regression controlled for confounders, complement hyperactivation failed to independently predict progression to severe disease. C3a, C3a/C3 ratio, and sC5b-9/C3 ratio were correlated positively with numerous inflammatory biomarkers, fibrinogen, and VWF:Ag (von Willebrand Factor antigen), and negatively with plasminogen and ADAMTS13 activity.

Conclusions
Evidence of complement hyperactivation in COVID-19 was observed, associated with hyperinflammation and thrombotic microangiopathy. Complement inhibition should be further investigated for potential benefit in patients displaying a hyperinflammatory and microangiopathic phenotype.

[892] Tuberculosis infection: Assesment of community awareness

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Introduction

Russia is one of the three countries with the highest burden of tuberculosis (TB). Over the past 15 years, there has been an improvement in an epidemiological situation. In 2020, compared to 2019 the overall tuberculosis rates decreased by 7.2% and mortality rates by 11.9%. However, the situation remains really poor.

Aim of the study

The aim of the study was to assess community awareness of the TB infection (routes of contracting, symptoms, prevention and treatment).

Materials and methods

Anonymous survey (13 questions) of 30 TB patients and 30 healthy individuals was conducted.

Results

Community awareness (TB and healthy people) is not homogenous. 56.6% respondents were aware of the causative agent, 33.3% found it difficult to answer, while the healthy population chose the correct answer significantly more often - 83.3% ($p = 0.04$).

The healthy population significantly more often (100% versus 83.3%) chose the respiratory system as the most frequently affected ($p=0.05$).

TB patients (83.3%, $p = 0.04$) considered the period 3-12 months to be the optimal period of tuberculosis treatment; versus 60% healthy people who determined the period 12-24 months.

86.6% patients versus 60% ($p=0.02$) believed it was impossible to interrupt treatment, 3.4% patients believed it was possible, 10% TB versus 40% healthy people were sure that it was possible to interrupt treatment for a short time. More often ($p = 0.04$) healthy people (60%) thought undergoing routine examination was the best way (29% of TB were identified by this method). 55% TB was confirmed when seeking medical help from a doctor. Among healthy people, this method of detection was considered the best only by 11.4%. The healthy population (28.6% versus 0% of patients) considered it is necessary to undergo examination in contact with TB patients. Awareness of the main route of transmission, protection against of TB, chest and systemic symptoms, side effects of anti-tuberculosis drugs, complete completion of the treatment course, the role of the doctor and the patient in recovery and opinion on the possibility of healing in the groups (TB and healthy people) were similar.

Conclusions

It can be concluded the community awareness of TB issues is poor. Healthy individuals are better informed on certain TB issues. The information received indicates the need for further sanitary and educational work. Education of community with health care and medical volunteer activities can contribute to epidemiological situation improvement.

[896] Comparison of the quantity and cause of hospitalizations in a maxillofacial surgery unit during the restrictions related to the SARS-CoV-2 pandemic in 2020 and the corresponding period of 2019

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Introduction

In the history of mankind there are periods of dangerous epidemics of various diseases. In 2020, the new SARS-CoV-2 rapidly spread all around the world causing a global health crisis. To prevent the spread of the virus the polish government introduced numerous restrictions.

Aim of the study

The aim of the study was to evaluate the differences between causes and duration of hospitalisations in the maxillofacial surgery unit in a selected timeframe of 2020, in which SARS-CoV-2 restrictions applied and a corresponding timeframe of 2019.

Materials and methods

The study has been conducted retrospectively. Medical records of patients admitted from 14th March 2020 to 17th May 2020 as well as from 14th March 2019 to 17th May 2019 have been evaluated. The causes of hospitalisation have been divided into 7 categories:

I - craniofacial fractures,
II - neoplasms,
III - inflammatory diseases,
IV - temporomandibular disorders,
V - removal of plates after osteosynthesis,
VI - cysts,
VII - others.

The duration of hospitalisations has been assessed as well. The results have been statistically evaluated by means of the Chi-squared test and the Mann-Whitney test.

Results

There were 149 admissions in the selected timeframe of 2020 in comparison to 349 in 2019. The statistical evaluation has proved that in 2020 patients had been admitted significantly more frequently due to fractures and significantly less frequently due to cysts than in 2019. No significant differences have been found in regard to other causes of admission including neoplasms. The differences in admissions caused by temporomandibular joint disorders could not be evaluated due to test limitations. The evaluation has also proved that the hospitalisations were significantly longer in the selected timeframe of 2020 than in the corresponding timeframe of 2019.

Conclusions

The SARS-CoV 2 restrictions may impair or delay the diagnosing and treatment of patients suffering from neoplasms. Even during lockdown craniofacial fractures are still common.

[1075] The symptoms of eye dryness in students of Warsaw universities during the SARS-CoV-2 pandemic

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Introduction

The dry eye syndrome is a condition affecting tears and the ocular surface. The symptoms include dryness, burning, sandy or gritty sensation, eye redness, sensitivity to light or blurred vision. Eye surface is protected by the tear film, distributed over the globe during blinking. Prolonged use of screens reduces the rate of blinking, which can lead to dryness. Due to the SARS-CoV-2 pandemic, people started spending more time with electronic devices.

Aim of the study

This study aims to check whether time spent in front of screens affects the symptoms of eye dryness.

Materials and methods

The study group consisted of 323 students (251 female and 69 male) of universities located in Warsaw aged 18-25. The participants were asked to fill out an online questionnaire, which included questions about time spent in front of screens now and in the previous year. The OSDI (Ocular Surface Disease Index) questionnaire has been used to ask about the symptoms of eye dryness now and a year ago.

Results

The analysis revealed that the time spent with electronic devices this year compared to last year increased in 94.43% (305/323) cases, including: in 53.87% (174/323) by 3 to 6 h, in 24.15% (78/323) by 1 to 3h and in 16.4% (53/323) over 6h. The number of people for whom the value of answers to questions from the OSDI questionnaire, comparing the current and the previous year, increased in at least one question by at least one point, was 94.42% (288/305). The overall numerical point increase was as follows: from 1 to 4 points in 37.15% (107/288), from 5 to 8 points in 45.14% (130/288) and from 9 to 12 points in 17.71% (51/288) of participants. The average point increase in total, depending on the extension of the time spent in front of the screen, amounted to: for an extension from 1 to 3h: 4.9, from 3 to 6h: 5.77 and for above 6h: 6.06. The highest number of respondents showed a point increase in the question of soreness, burning and eye irritation - 70.83% (204/288), and the smallest in the question about eye problems while driving at night - 23.61% (68/288).

Conclusions

In the vast majority of respondents, the time spent with electronic devices increased. Most of them reported the appearance or worsening of dry eye symptoms. The amount of extra hours in front of a screen is likely to correlate with the severity of dry eye symptoms.

[1081] Awareness of blood-borne infections among teenagers using beauty services.

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Introduction

Around 70% of teenagers in Poland use beauty services. Many of the procedures performed in beauty salons are associated with the risk of blood-borne infection with human immunodeficiency virus (HIV), hepatitis C virus (HCV) and hepatitis B virus (HBV).

Aim of the study

The aim of the study was to assess the knowledge and awareness of blood-borne infections associated with cosmetic procedures among teenagers using beauticians' services.

Materials and methods

A cross sectional survey study was performed. The questionnaire investigated knowledge about infection risk due to common blood-borne pathogens and possibilities of preventing their transmission in beauty salons. The survey was conducted among female students in primary school, high school and technical school in ŚwiĘtokrzyskie and Mazowieckie Polish voivodeships in January 2020.

Results

We collected 107 correctly filled surveys (out of 157). The study group consisted of girls aged 12-20 with a median age of 17. The study revealed that 86/107 (80,4%) of respondents are aware of the blood-borne infection risk while 5/107 (4,7%) claimed there is no such risk and 16/107 (15%) did not know whether such risk may occur. The six most dangerous infections according to respondents were: HIV (92/107, 86%), HCV (35/107, 32,7%), HBV (21/107, 19,6%), mycosis (28/107, 26,2%), Treponema pallidum (24/107, 22,4%), Neisseria gonorrhoeae (21/107, 19,6%). Tools disinfection before procedures in beauty salon was witnessed by 66/107 (61,7%) of surveyed adolescents. The majority of respondents (76/107, 71%) claimed that tools used by their beauticians are sterilized, but 71/107 (66,4%) admitted that they have never asked about it. Approximately half of the surveyed girls (55/107, 51,4%) pay attention if tools used in the beauty salon they usually attend to are sterilized, while 44/107 (41,1%) have never reflected about it. As the method, which decreases the risk of infection, most respondents pointed to disposable supplies (88/107, 82,2%), disinfection of reusable supplies (86/107, 80,4%) and usage of personal protective equipment (78/107, 72,9%), 46/107 (43%) chose handwashing and 35/107 (32,7%) protective vaccination.

Conclusions

The majority of teenagers are aware of the blood-borne infection risk during cosmetic procedures. Due to the fact that 20% declared lack of awareness of blood-borne infections in beauty salons education about preventive methods is necessary.

[1084] A study of the level of acceptance towards the influenza vaccine and the COVID-19 vaccine in the medical community

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Introduction
Despite the research conducted worldwide, there is no treatment specific for SARS-CoV-2 infection with efficacy proven by randomized controlled trials. A chance for a breakthrough is vaccinating the majority of the global population.

Aim of the study
The public opinion surveys on vaccine hesitancy prompted our team to investigate the Polish medical community's attitude towards the SARS-CoV-2 and influenza vaccinations.

Materials and methods
In-person and online surveys of Healthcare Workers (HCWs): doctors, nurses, medical students, and other allied health professionals (n=419) took place between 14.09.2020 and 5.11.2020.

Results
In our study, 68.7% of respondents would like to be vaccinated with the COVID-19 vaccine. The safety and efficacy of vaccination against COVID-19 would persuade 86.3% of hesitant and those who would refuse to be vaccinated. 3.1% of all respondents claimed that no argument would convince them to get vaccinated. 61.6% of respondents declared a willingness to receive an influenza vaccination, of which 83.3% were also inclined to receive the planned COVID-19 vaccination.

Conclusions
Although a significant part of respondents - 62.5% (262/419) indicated, they trusted the influenza vaccine more than the COVID-19 vaccine in direct comparison, more respondents intended to get the COVID-19 vaccination than the influenza vaccine in the 2020/2021 season.

[1092] Analysis of traveling-related factors among patients with dengue fever and malaria returning from tropical regions

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Introduction

Nowadays travelling to tropical destinations became affordable, so there is an increase in occurrence of tropical diseases in tourists. Malaria is caused by protozoa of the Plasmodium group and is characterized by hectic fever. In dengue fever, caused by dengue virus, there are fever, muscle/joint pains and characteristic skin rash. Both diseases are mosquito-borne and have usual onset about 2 weeks after exposure. For people traveling to tropical countries it is often recommended to get vaccinated and take antimalarial drugs in endemic areas.

Aim of the study

The aim of the study was to analyze factors related to traveling to tropical regions among patients, who returned with either dengue fever or malaria.

Materials and methods

The study took into account 22 patients (6 men,16 women) admitted to the Department of Infectious and Tropical Diseases and Hepatology, who were diagnosed with either malaria(3 patients) or dengue fever(19 patients) between the years 2011-2019. Patients were divided into 2 groups-of tourist traveling via travel agencies(12 patients) and independent travelers(10 patients). Various factors were analyzed among these groups.

Results

Travelling destinations included over 15 countries mainly in Asia, with most(6) cases from Thailand. For tourists typical stay was 2 weeks and for independent travelers about a month. The mean age of travel agency's tourists was 35 years. All 12 patients were diagnosed with dengue fever. At admission, patients presented high fever(100%), muscle/joint pains(66.7%), tiredness(50%), vomiting(41.7%), skin rash(41.7%), headache(25%). Up to 66.7% of patients presented symptoms after the return. Half of patients had recommended vaccinations and only 1 patient was taking antimalarial drug. The mean age of independent travelers was 40 years. Out of 10 patients 7 were diagnosed with dengue fever and 3 with malaria. At admission, patients presented high fever(100%), headache(40%), muscle/joint pains(40%), skin rash(40%), tiredness(20%) and vomiting(20%). In half of patients symptoms occurred after the return. Up to 70% of patients had recommended vaccinations and 30% patients were taking antimalarial drugs.

Conclusions

With increasing number of travels to tropical destinations, it is important to suspect tropical diseases in patients presenting high fever and flu-like symptoms after return. Still, a small number of travelers prepare themselves medically before exotic trips, especially clients of travel agencies, so It is important to raise awareness about proper preparation

Internal Medicine

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[803] The relation between temperamental preconditioning, self€control of impulses and nutritional status

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Introduction

The pathophysiology of obesity is based on the interaction between environmental, genetic, psychosocial, and behavioral factors. It is increasingly pointed out that some personality traits predispose to overweight and obesity. Of great importance for the prevention is to accurately define the group of people who, due to their temperamental conditions and the biological basis of impulse control, are at risk group of overweight and obesity development.

Aim of the study

The aim of this study is to examine the association between temperamental preconditioning, self-control of impulses, and nutritional status in a large sample of the adult general population in Poland.

Materials and methods

Three hundred and three subjects (including 175 women) were included in this study. The temperamental conditions were assessed on the basis of EAS scale (assessing fear and anger, activity, and sociability) and control of impulses using IVE scales (considering impulsiveness, the propensity to risk, and empathy).

Results

Group included 18 underweight (5.9%), 138 normal weight (45.5%), 100 overweight (33%) and 47 (15.5%) obese subjects. In overweight and obese groups, we observed a positive correlation between the degree of impulsiveness and the level of anger. Also, in the overweight group, a positive correlation between the empathy level and the level of fear was confirmed.

Conclusions

A higher degree of anger may increase impulsiveness that may contribute to overweight and obesity development. Among overweight persons being more empathic can significantly affect the level of fear that predisposes to a sedentary lifestyle.

[843] Deaths caused by upper gastrointestinal bleeding- an analysis

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Introduction

Upper gastrointestinal bleeding is a common emergency situation. Incidence of blood loss, which originated proximally to the Ligament of Treitz, is estimated at 40-140/100 000.
Some research articles suggest that there is a correlation between the number of bleedings from upper gastrointestinal tract and seasons of the year.
It is also claimed that a decline of cases can be observed during COVID-19 pandemic.

Aim of the study

The aim of this article was to investigate various factors associated with sudden deaths caused by upper gastrointestinal bleeding.

Materials and methods

Data were collected from the register of deaths of Forensic Medicine Department, Medical University of Warsaw. The research includes information about deaths caused by upper gastrointestinal bleeding from March 2019 to November 2020 and number of sudden deaths of all causes during that period. Analysed factors were: sex, age of death, cause of death, alcohol levels (in blood or in muscle tissue), seasons of the year.

Results

A total of 161 cases of death caused by upper gastrointestinal bleeding was included in the study. Ratio of deaths caused by upper gastrointestinal bleeding to all sudden deaths was calculated and had a mean value of 10.9%. The lowest value (6.6%) was observed in autumn 2019 and the highest (15.1%) in autumn 2020. The ratio during COVID-19 pandemic was higher than pre-pandemic values and they differed significantly ($p = 0.0265$).
No seasonal pattern was visible.
Mean age of death caused by upper gastrointestinal bleeding was 57.8 years (sd 15.15884, median 61, min 18, max 96). 92% of men died before the age of 72, and 89% of women before the age of 85.
Three times more men died due to upper gastrointestinal bleeding, than women ($p = 1.949x10^{-7}$).
Mean level of alcohol measured was 0.71 €° (sd 1.192442, median 0€°, min 0 €°, max 5.5 €°).
No correlation was found between alcohol level and age. Correlation between alcohol level, age of death and sex was statistically insignificant.

Conclusions

More men died from upper gastrointestinal bleeding than women.
Women who died from upper gastrointestinal bleeding reached a higher age of death than men.
During COVID-19 pandemic there was an increase of deaths caused by upper gastrointestinal bleeding.

[889] Hypolipidemia in COVID-19 is associated with renal deterioration precipitated by a dysregulated immune response, fibrinolysis shutdown, and thrombotic microangiopathy

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Introduction
Reduction of atherogenic and prothrombotic lipoproteins is often the ultimate goal of nutritional interventions. However, this is complicated given that hypolipidemia is frequently observed in coronavirus disease 2019 (COVID-19), a condition which often presents with thrombotic events. Hence, the role of lipoproteins, or depletion thereof, in the development of SARS-CoV-2-induced immunothrombosis and multi-organ injury has yet to be explored.

Aim of the study
The study aimed to explore the association of hypolipidemia with patient outcomes over the course of illness, focusing on the role of more specialized apolipoproteins apo A1 and apo B and their relationship to biomarkers of inflammation and hemostasis.

Materials and methods
Lipid profiles of 50 COVID-19 patients and 30 sick controls presenting to the Emergency Department (ED) were measured in this prospective observational study. The primary outcome was development of severe acute kidney injury (AKI), given previous observations that COVID-19 is associated with signs of a secondary thrombotic microangiopathy (TMA) involving the kidneys. Need for hospitalization and ICU admission were secondary outcomes. Lipoproteins were analyzed for independent association with serum creatinine (SCr) increase ratio and correlated with a wide panel of biomarkers.

Results
Patients in the COVID-19 cohort had significantly lower apo A1 ($p=0.006$), and higher apo B/apo A1 ratio ($p=0.041$) compared to sick controls. Patients developing severe AKI had significantly lower LDL-C ($p=0.021$). Apo B/apo A1 was associated with 2.25-fold decrease in serum SCr increase ratio, while LDL-C with a 1.5% decrease. Hypolipidemia correlated with low plasminogen, ADAMTS13 activity/VWF:Ag, and high inflammatory biomarkers (CRP, IL-6, IL-8, IL-10), plasminogen activator inhibitor-1 (PAI-1), ED creatinine, and SCr increase ratio.

Conclusions
Although favored in dietetics, findings of a low LDL-C in COVID-19 patients should be alarming in light of our observations. Low apo B/apo A1 ratio and LDL-C are predictive of renal deterioration in COVID-19 patients, and low LDL-C in particular may potentially serve to indicate COVID-19 related AKI driven by disrupted fibrinolysis and a secondary thrombotic microangiopathy-like process.

[912] Radioiodine therapy in patients with toxic nodular goitre

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Introduction

Radioiodine therapy in patients with toxic nodular goitre

Aim of the study

The aim of our study was to assess the effectiveness of radioiodine therapy (RIT) on the achievement of euthyroidism and reduction of thyroid volume, in patients with toxic nodular goitre (TNG).

Materials and methods

Material and methods: During the last 7 years, we treated 3800 patients with TNG, aged 30-70 years; 82% female and 18% male; 2200 patients with multinodular goitre (MNG) and 1600 with autonomous toxic nodule (ATN); thyroid volume ranged between 16 and 130 ml (30% with thyroid volume >60 ml). Qualification of these patients were based on clinical features, characteristic appearance on thyroid scans and ultrasound. Malignant changes were excluded in all nodules by fine needle aspiration biopsy. All the patients had serum TSH levels below 0.1 mU/l and effective half-life more than 3 days at the time of treatment. The activity dose was calculated by Marinelli's formula and ranged between 200 and 800 MBq. The absorbed dose (Gy) ranged between 150 and 260 for MNG, and 200-300 for ATN. Follow-up control was done every 6 weeks. Thyroid ultrasound, and thyroid scan were done before and after12 months of RIT to assess RAIU, volume of thyroid gland and nodules. Repeated RIT was given after 6 months of the first dose if needed.

Results

Results: After 4 years of follow-up, the success of treatment was: 97% of patients with ATN and 92% of patients with MNG achieved euthyroidism. Three percent of patient with ATN and 8% of patient with MNG develop hypothyroidism. Thirty-four patients with toxic MNG and 5 patients with ATN received more than one dose of RIT. Thyroid volume reduced to 52% in MNG and 47% in ATN.

Conclusions

Conclusions: The achievement of euthyroidism and the remission of the symptoms and signs of clinical hyperthyroidism, were due to well preparation of the patients; accurate measurement of administered activity, relatively high effective half-life, and well-organised follow-up.

[928] Assessment of dietary habits in patients with immunoglobulin a nephropathy

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Introduction

Immunoglobulin A nephropathy (IgAN) is one of the major causes of chronic kidney disease (CKD). 20% of patients in Latvia progress to the end-stage renal disease during 5 years after the diagnosis. Kidney Disease Outcomes Quality Initiative (KDOQI) updated dietary guidelines for CKD patients in 2020.

Aim of the study

To evaluate dietry habits in patients with IgAN, compare them with the control group and find out whether IgAN patients follow the dietary recommendations.

Materials and methods

A prospective case-control study was performed at Pauls Stradins Clinical University Hospital Nephrology center from June 2020 till February 2021. During this time period adults with histologically confirmed diagnosis of IgAN and healthy control group individuals matched by sex and age were included. A three-day food record was used for the analysis of dietary habits that afterwards were interpreted in the application „DietOrganizer". IBM SPPS 26.0 was used for data statistical analysis.

Results

10 women (40%) and 15 men (60%) with age range 22-65 (median - 45 years) were included in each group. Average caloric intake in IgAN group was less, compared to control group: median 2026 kcal (range 340-3214) and 2427 (range 1294-3607), respectively. As well, lower were average protein intake (g) in IgAN group - 96.0 (range 15-139) versus 108.0 (range 49.50-123.50) in control group and fat intake (median 84) versus 97 in control group. There were statistically significant differences in the polyunsaturated fat intake between two groups ($U = 188.50$, $p = 0.016$). Median carbohydrate intake (g) in IgAN group was higher, respectively 243 (range 34-370) and 235 (range 92 - 462).

Summarizing the intake of micronutritions, IgAN group consumed more calcium (median 739) than control group (median 687), however, it is insufficient according to recommendations in both groups. The intake of magnesium and phosphorus was lower in IgAN group (median 308 and 1437) compared to control group (388 and 1731), respectively. Daily phosphorus amount was higher than recommended for CKD patients.

Dietary sodium was consumed more than 2g/day in both groups, but less in CKD patients ($U=171$, $p=0.006$) comparing to healthy individuals. Surprisingly, dietary potassium was higher in IgAN group (3397), than in control group (2940).

Conclusions

Dietary differences between the IgAN and control groups are observed. It can be concluded that IgAN patients do not follow the dietary recommendations.

[944] Alcohol intoxication and its symptoms frequency in different demographic groups of the Latvian population

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Introduction

Large part of population of Latvia is using alcohol recklessly. Medical workers daily encounter hospitalized people with strong alcoholic intoxication. Alcohol misuse is real problem in modern Latvia. Acute intoxication is associated with lots of complications like different diseases, accidents, domestic violence, homicide, suicide etc.

Aim of the study

To find significant differences in alcohol intoxication, taking into account gender and social situation.

Materials and methods

Retrospective, descriptive study was performed one of the hospitals in Latvia.
Population: all hospitalized patients with diagnosis „Alcohol abuse with intoxication" (F10.12) from 01.01.2019 to 30.04.2019. Clinical data were collected from paper medical records (01.01.2019 - 30.04.2019.)

Results

The study included 157 patients, 107 male and 50 female patients undergoing inpatient treatment with clinical diagnosis F10.12. The average patient age was 34 years old for females and 36 years old for males. 93 (87%) of male 45 (90%) and female were hospitalised with confusion; 36 (34%) of male and 21 (42%) of female cases had gastrointestinal symptoms; 42 (39%) of male and 20 (40%) female cases had tachycardia, 28 (26%) of male and 21 (42%) of female cases had chest pain. 30 (28%) of males and 15 (30%) of female cases had concomitant diseases.

Conclusions

Women enter the hospital with a lower pre mille of alcohol than men. Elderly patients spend a longer time in the hospital than young ones due to concomitant diseases.

[992] The prevalence of heritable connective tissue disorders in patients with gastroesophageal reflux disease

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Introduction

Hereditary disorders of connective tissue are heterogeneous group of diseases caused by genetic defects synthesis of extracellular matrix proteins or disorders of the connective tissue morphogenesis. Literature data suppose that presence of heritable connective tissue disorders contribute development of gastrointestinal pathology due to high presence of collagen in structures of gastrointestinal tract. Gastroesophageal reflux disease (GERD) seems to be on of this condition.

Aim of the study

To evaluate the prevalence of heritable connective tissue disorders in patients with GERD.

Materials and methods

65 patients have been exemined at Grodno City Hospital N2. The average age was 45 (35; 54) years old. All patients were undergone esophagogastroduodenoscopy with biopsy of the lower third of the esophagus for diagnosis of GERD. Patients were divided into 2 groups: group 1 - patients with GERD (n=35), group 2 - comparisson group (patients withought GERD) (n=30).

For assesment of presense of markers of heritable connective tissue disorders we provided physical examination, anthropometry and ultrasound of internal organs. The presence of connective tissue disorders markers were classified according to National Clinical Recomendations (Minsk, 2014). Differences between groups were established with using of Statistica 10.0.

Results

17 (49%) patients with GERD had connective tissue disorders, it is statistically significant more then in comparisson group (5 (17%) cases), p=0,009. 33 (94%) patients with GERD had insufficiency of the lower esophageal sphincter in comparisson with group 2 (13 (43%) cases, p=0,000). Patients with GERD in contrast to comparisson group demonstrated higher prevalence of joint hypermobility (12 (34%) and 3 (10%) cases respectively, Ń€=0,037), high arched palate (9 (26%) and 1 (3%) cases, p=0,036). Also patients of group 1 had duodenogastric reflux in 10 (29%) cases, abnormalities in the shape and curves of the gallbladder in 17 (49%), nephroptosis in 16 (46%), minor heart anomalies in 8 (23%), myopia in 9 (26), astigmatism in 3 (9%), scoliosis in 13 (37%), micro- or retrognathia in 6 (17%), impaired growth of teeth in 10 (29%), flat feet in 7 (20%), varicose veins of the lower extremities in 8 (23%), anomalies in the shape of the eyes in 6 (17%) cases.

Conclusions

The obtained data demonstrate that heritable connective tissue disorders are widely spread among patients with GERD and may contribute development of this disease because of abnormality of connective tissue structure and metabolism.

[1111] The outcome of radioiodine therapy after five years in patient with non - toxic nodular goitre

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Introduction

There is no consensus regarding the optimum treatment of benign non - toxic goitre. L -thyroxine suppressive therapy is widely used but there is poor evidence of its efficacy and it may have serious adverse effects on health. Radioiodine therapy (RIT) in patients with non-toxic multinodular goitre recently becomes more common method in comparison to surgery which is recommended for large goitres or when malignancy cannot be excluded.

Aim of the study

The aim of our study was to evaluate the short term efficacy of radioiodine therapy to reduce thyroid volume with minimal risk of hypothyroidism in patients with non-toxic nodular goitre.

Materials and methods

We treated 120 patients, aged 20 - 76 years. Initial 24 h RAIU was ranged between 22 - 44% and effective half-life was more than 3 days. Thyroid volume ranged between 42 - 170 ml. Malignant changes were excluded in all nodules by fine needle aspiration biopsy. The activity dose was calculated by the use of Marinelli's formula and ranged between 200 - 800 MBq. The absorbed dose ranged between 150 and 260 Gy. Thyroid ultrasonography, and thyroid scan was done before, after 12 month and yearly for four year of RIT. Follow up control was done every 6 weeks in the first year, then every 6 months.

Results

After 12 months of radioiodine therapy a mean thyroid volume reduction of 46% was achieved. Euthyroidism persist in 91% of patients, and hypothyroidism develop in 9% of patients. After 3 years of RIT 10% of patient develop hypothyroidism. After 5 years a mean thyroid volume reduction of 49% was achieved and 11% of patients develop hypothyroidism. All patients were highly satisfied; the compressive symptoms relieved.

Conclusions

Radioiodine is non-invasive, safe and cost effective method of therapy for reduction of non-toxic goitre and should be used as first choice in every patient with non toxic nodular goitre with thyroid volume > 40 ml. The reduction of thyroid volume with low percent of hypothyroidism were due to well accurate measurement of administered activity, relatively high effective half - life, and well - organised follow up.

Internal Case Report

Date:

Sunday, 30th May 2021, 8:30 AM

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[794] Adult-onset Still's disease (AOSD) - a diagnostic challenge: case report

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Background

AOSD is a rare inflammatory disease of unknown etiology. The most typical symptoms of AOSD include evanescent rash, arthritis and quotidian fever but clinical course may significantly vary among patients. AOSD is considered as a diagnosis of exclusion - it should be made based on the Yamaguchi or Fautrel criteria but requires excluding infectious, malignant, and other connective tissue diseases.

Case Report

In October 2019 a 36-year old woman was admitted to the hospital because of generalized maculopapular rash, fever, arthralgia, malaise, cervical lymphadenopathy and sore throat. As wide-range antibiotics were ineffective, the patient was transferred to the Department of Rheumatology of Military Institute of Medicine. Due to high levels of CRP and hepatic transaminases patient was started on oral glucocorticosteroids (GCS) and intravenous immunoglobulins (IVIg), but without significant improvement. Laboratory tests revealed very high levels of serum ferritin, while antinuclear antibodies were absent. After exclusion of neuroinfection and infective endocarditis, a preliminary diagnosis of ASD was suggested and treatment with intravenous (followed by oral) GCS and cyclosporine (CsA) was started. The patient was readmitted to the hospital 3 weeks later because of persisting fever and treatment side-effects. CsA was stopped and the patient was restarted with IVIg. Few days later patient developed generalized lymphadenopathy. The PET CT scan was performed and revealed increased metabolism in lymph nodes and spleen. However, histopathologic examination ruled out lymphoproliferative process. Therefore, as the patient met the Yamaguchi criteria, the diagnosis of AOSD was confirmed. Treatment with steroids was continued and, as IVIg were inefficient, intravenous cyclophosphamide was started which led to complete resolution of symptoms.

Conclusions

Although AOSD is a relatively rare auto-inflammatory disease it should be taken into account in a differential diagnosis of patients suffering from fever of unknown origin, especially if it is accompanied by skin rash and arthralgia/arthritis.

[805] Atypical manifestation of Kaposi's sarcoma in kidney transplant recipient.

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Background

Kaposi's sarcoma is one of the most common malignancies in patients after kidney transplantation. Its occurrence is strongly associated with HHV-8 virus infection and immunosuppression. More than 90% of patients have primary skin changes, which are usually purple lesions. The lack of skin lesions is considered rare, especially in the iatrogenic type of sarcoma, including patients on immunosuppression, and therefore may cause a diagnostic challenge due to non-specific symptoms resulting from involvement of various organs and tissues and imitating other diseases. The aim of this case presentation is to raise attention to the atypical clinical manifestation of this malignancy.

Case Report

A 33-year-old woman was diagnosed with Kaposi's sarcoma in clinical stage IV during a check-up at the nephrology ward, two years after kidney transplantation, before planned arteriovenous fistula closure presenting signs and symptoms of progressive dyspnea and fatigue lasting for ten months. The patient was on an immunosuppression regimen since the age of 17 due to chronic glomerulonephritis.
Further examinations revealed enlarged cervical lymph nodes and pulmonary metastases in X-ray, but no skin lesions. A cervical lymph node biopsy revealed Kaposi sarcoma cells, CD34(+), CD31(+), vimentin(+), fascin(+), S-100(-), SMA(-), CD68(-). The CD23 and CD21 staining were positive in the dendritic cells of preserved lymphoid follicles of the lymph node. Based on the pathological examination, a diagnosis of Kaposi's sarcoma was made.
The patient completed 9 cycles of chemotherapy with liposomal doxorubicin, which is a standard treatment of Kaposi's sarcoma. Complete remission was confirmed by PET-CT scan. The patient remains in complete remission with a functioning kidney graft for 8 years.

Conclusions

The cancer was diagnosed with about 10 months delay due to the lack of skin lesions. Regardless of late diagnosis in the dissemination stage of the disease, the patient was successfully treated with chemotherapy.

[834] Persistent flushing - a menopause sign, a stress reaction or a symptom of neuroendocrine tumor? - A case report

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Background

Neuroendocrine tumors (NET) are neoplasms that arise from cells of the endocrine and nervous system. They are commonly associated with the gastrointestinal tract. In many cases NETs can secrete hormones, usually serotonin. Due to that, the clinical presentation can include various symptoms such as flushing, diarrhea and heart lesions. However, these symptoms often appear when tumor is at later stages, often already metastasized.

Case Report

In 2017 a 65-year-old woman underwent a segmental small bowel resection. The histopathological examination confirmed the neuroendocrine character of the neoplasm. A PET 68GA-DOTA-TOC imaging carried out after operation revealed an overexpression of somatostatin receptors in multiple locations in the abdomen. Due to that, in 2018 the patient received four cycles of Lu-177-Based Peptide Receptor Radionuclide Therapy. During treatment, new foci of pathological radioisotope uptake were detected. However, PET in 2019 and 2020 showed stabilization of the disease.

During the NET treatment in the Department she was also diagnosed with nodular goiter with retrosternal extension, compressing the trachea. For this reason, she underwent subtotal thyroidectomy. Histopathology examination did not reveal any cancer cells. Currently, there is no significant compression or displacement of the trachea.

Additionally, the patient also suffers from type 2 diabetes mellitus and hypertension. She presents chronic diarrhea, treated successfully with loperamide. The patient was also diagnosed with rosacea.

What is more, for the last couple of years, the patient suffered from aggravated flushing syndromes. The cutaneous erythema usually appeared on the face and neckline after stress.

Conclusions

Symptoms of NETs are often nonspecific. In middle-aged women, they can be misdiagnosed as perimenopausal symptoms - particularly flushes can be associated with both conditions. The occurrence of rosacea can make the diagnosis even more difficult. Careful evaluation of symptoms such as flushing gives a chance for an earlier diagnosis and effective treatment.

[845] The Long Path to a Correct Diagnosis of Stiff-Person Syndrome: A Case Report

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Background
Stiff person syndrome (SPS) is a rare, progressive autoimmune condition clinically characterized by muscle stiffness and painful spasms in the axial muscles, severely impairing mobility. Persistent, untreated symptoms can lead to long-term neurological consequences and disability.

Case Report
A 42-year-old female repeatedly admitted to the Riga East Clinical University Hospital initially due to 2-year-long history of painful and asymmetrically tense, rigid muscles of the back. The symptoms were not relieved by NSAIDs and muscle relaxants, previous rehabilitation procedures did not provide any effect. The patient had impaired mobility, difficulties to change body's position and bend over due to the symptoms, tension and spasms in the back muscles often were provoked by cold. She had previous history of chronic autoimmune hypothyroidism, pharmacologically compensated. Neurological examination showed abnormal posture, stiff and painful axial muscles, otherwise unremarkable. MRI of the head, cervical and thoracic spine showed no pathology. Cerebrospinal fluid analysis showed no pathology, tests for infectious diseases and other laboratory findings were unremarkable. On EMG continuous motor-unit activity was registered. Antibodies for NMDA, VGKC, GAD65, Hu were negative in CSF, however after repeated evaluation 6 years later anti-GAD65 turned out to be positive, therefore, confirmed the diagnosis of SPS. Paraneoplastic syndrome, tumors have been ruled out so far. During multiple hospital stays patient received plasma exchange procedures, glucocorticoids, IVIg, diazepam, muscle relaxants after which the patient's condition significantly improved, however recently she developed LADA diabetes. The patient had been observed for a total of 8 years until accurate diagnosis could be made. She continues to receive muscle relaxants, benzodiazepines, hypothyroidism and diabetes correction therapy with re-examination twice a year.

Conclusions
This case shows a rare example of stiff person syndrome. Diagnosis was confirmed based on clinical manifestation, positive GAD65 antibodies in CSF and other disease exclusion. Furthermore, the symptom reduction after plasma exchange procedures and immunosuppressive therapy confirms autoimmune cause. Stiff person syndrome should be considered in all patients with persistent axial muscle stiffness and painful spasms that are resistant to conventional therapy. Early diagnosis and treatment is significant for a fast patient's management and recovery.

[891] COVID-19 as an emerging obstacle to combating multidrug-resistant organisms: A case of New Delhi Metallo- β-Lactamase producing Klebsiella Pneumoniae infection

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Background
Emergence of multi-drug resistant (MDR) organisms poses a significant burden on the healthcare system, and extensive reliance on empiric antibiotic regimens during the ongoing coronavirus disease 2019 (COVID-19) pandemic has only aggravated this problem. With the addition of a myriad of other susceptibility factors, such as immunosuppressive therapy, overloading of hospital capacity, as well as viral associated immune dysfunction and immunoparalysis, it is not difficult to conceive that secondary infection with MDR organisms is a highly probable consequence among hospitalized COVID-19 patients.

Case Report
In this case report we describe a patient with a prolonged course of hospitalization, that acquired a highly resistant New Delhi metallo- **β**-lactamase (MBL)-producing Klebsiella Pneumoniae infection. Despite seemingly adequate control of the initial New Delhi MBL (NDM) K. pneumoniae infection with colistin alone, it was likely not completely cleared and resurged once he contracted severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection in late December 2020. The bacterial superinfection was reidentified two weeks following diagnosis of COVID-19 illness, during which oxygen therapy, dexamethasone, and remdesivir were administered, and a gradual decline in lymphocyte count, and increase in neutrophils were observed. The bacterial superinfection gradually responded to a combination of colistin and ceftazidime.

Conclusions
The circumstances of the bacterial infection resurgence and pattern of laboratory findings suggest a role of COVID-19-associated immune dysfunction, characterised by dysregulation of both pro- and anti-inflammatory processes, which emerging evidence suggests may hamper the ability of SARS-CoV-2 infected patients to clear bacterial infection. Besides immune dysregulation, prolonged hospitalisation, immunosuppressive treatment with steroids, mechanical ventilation, as well as administration of broad-spectrum antibiotics likely produced optimal conditions for persistent infection with this highly resistant microorganism. Upon adequate management of SARS-CoV-2 infection and addition of ceftazidime to the antibiotic regimen already comprising colistin, the patient finally cleared the NDM K. pneumoniae infection. On the whole, it is apparent that amidst the current COVID-19 pandemic, hospitals should remain vigilant of the risk for infection by MDR organisms and devise appropriate mitigation and treatment strategies to limit their impact.

[904] Deterioration of severe mitral regurgitation during the waiting time for MitraClip procedure.

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Background

MitraClip procedure enables minimally invasive correction of mitral regurgitation (MR) in patients with prohibitive surgical risk. Despite continuous improvement in the technology there are still anatomical contraindications to the procedure.

Case Report

A 75-year-old man with chronic heart failure (NYHA class III) and severe MR was admitted to the hospital for a qualification for MR treatment. Prior patient's medical history included PCI of the right coronary artery and coronary artery bypass graft within one year before admission, prior myocardial infarction, atrial fibrillation, left bundle branch block and tachycardia-bradycardia syndrome treated with DDD pacemaker implantation. Transthoracic echocardiography showed enlarged hypokinetic left ventricle (left ventricular end diastolic diameter equal to 56 mm, left ventricle ejection fraction (LVEF) was 50%) and severe functional MR with wide coaptation gap (2 mm) end effective regurgitant orifice (ERO) 45 mm2. The right ventricle was hypokinetic (TAPSE = 15 mm); the right ventricular systolic pressure was 60 mmHg. Patient was disqualified from the open chest surgery due to the high procedural risk. Transesophageal echocardiography (TEE) confirmed anatomical suitability for the edge to edge procedure. Patient was placed on the waiting list for MitraClip.

After two months the patient was readmitted due to the decompensation of heart failure. Repeated TTE showed LVEF 45-50%, and increased ERO (50 mm2). After typical medical therapy MitraClip procedure was attempted.

However, periprocedural TEE done prior to the septal puncture showed that the valve anatomy significantly changed. The leaflets became more restrictive and the coaptation gap increased to 6,5 mm. Respiratory maneuvers with increase of positive end-expiratory pressure did not manage to decrease the gap. The MitraClip procedure was aborted because the coaptation gap could not be treated even with the XTR device.

Following Heart Team re-evaluation and after thorough discussion with the patient the subject underwent successful mitral valve repair.

Conclusions

The main massage from the current case are as follow: 1. Functional MR is a very dynamic disease and its grade may change significantly within short periods. 2. The patients qualified for MitraClip procedure should be treated as soon as possible. 3. There is a large unmet need for percutaneous valve replacement.

[911] Case report: Anton's syndrome due to ischemic cerebrovascular disease

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Background
Anton's syndrome (AS) describes the condition in which patient deny their blindness despite objective evidence of visual loss and, moreover confabulate to support their stance. It is a rare extension of cortical blindness in which, in addition to the injury of the occipital cortex, other cortical centers are also affected, with patients typically behaving as if they were sighted.

Case Report
This case describes a 76-year-old patient with a history of long-standing diabetes and multiple ischemic strokes, who was admitted to the Department of Neurology, due to sudden vision loss. On admission, the patient was awake and oriented and had a slightly turned head to the right side. The sight loss was observed for the first time when the patient asked the doctor to turn the lights on because the room was dark. An ophthalmologic exam confirmed a severe vision loss. Ocular movements, as well as photo motor reflex, were preserved. Fundoscopic examination revealed changes secondary to diabetes. The patient sustained that she was able to see, despite the objective evidence of vision loss. Urgent CT(computed tomography) of the brain revealed in the left temporoparietooccipital lobe extensive low-density lesion which corresponds to chronic ischemia in the left posterior cerebral artery zone. Bilateral frontoparietal in the white mass revealed an extensive confluent lesion in terms of atherosclerotic encephalopathy with isolated focal microischemic lesions. Similar lesions were found in both basal ganglia, mutually in the pons, right hemisphere of the cerebellum. CT also verified calcification of both vertebral arteries. Considering clinical symptoms and results of performed medical tests, a patient has been followed up as an outpatient. The drugs and physical treatment had no improvement or reduction in the neurologic deficit. Blindness remained permanent.

Conclusions
AS may be unrecognized in routine neurological practice. A suspicion of cortical blindness and AS should be considered in patients with atypical visual loss and evidence of occipital lobe injury. Cerebrovascular disease is the most common cause of AS, as in our patient. Recovery of visual function will depend on the underlying etiology, with cases due to occipital lobe infarction after cerebrovascular events being less likely to result in complete recovery. Management in these circumstances should focus on secondary prevention and rehabilitation.

[913] Thrombocytopenia after COVID-19 in patient with HIV/HCV coinfection

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Background

Thrombocytopenia is a common disorder in HIV-infected patients. Usually, it is caused by peripheral platelet destruction. In patients with chronic HCV infection thrombocytopenia may result from an autoimmune process or inhibition of liver thrombopoietin production. Also, thrombocytopenia can be observed in patients with COVID-19 due to mechanisms that has not been explained yet.

Case Report

We present 42-year-old patient coinfected with HIV/HCV since 1996. He has been receiving antiretroviral treatment (ARV) irregularly. He has never suffered from thrombocytopenia or leukopenia before.
In 2020 he has been infected with SARS CoV-2 without any clinical symptoms. Several weeks later he was admitted to the intensive care unit (ICU) because of post-traumatic bleeding to the brain. During his stay in ICU he stopped ARV. His platelet count was low but still within normal limits.
In February 2021 he was diagnosed with thrombocytopenia. Platelet count was 9 G/L, HIV-1 RNA plasma viral load was 215111 copies/ml and CD4 lymphocytes level was 234 cells/ÎĽL. He started ARV with bictegravir, emtrycytabin, alafenamid, tenofowir. On admission to our department he presented slight symptoms of haemorrhagic diathesis on abdomen, upper and lower limbs. He was given a platelet transfusion and his platelet count got down to 6 G/L and the day after to 4 G/L. We started treatment with prednisone 2x40mg. During the next 2 weeks platelet count ranged from 8 to 12 G/L. Symptoms of haemorrhagic diathesis disappeared. In the third week in control nasopharyngeal swab for SARS CoV-2 PCR we got positive result but patient had no clinical symptoms. He was moved to the department for COVID-19 patients with normalisation of platelet count within the next 5 days.

Conclusions

HIV/HCV-positive patients with confirmed SARS CoV-2 infection can be asymptomatic.
Regular check-ups of the platelet count may be necessary in HIV / HCV coinfected patients even several months after infection with SARS CoV-2.

[932] Long-lasting history of a patient with precursor B-cell lymphoblastic lymphoma (B-LBL)

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Background

Precursor B-cell lymphoblastic lymphoma most oftenly occurs in young people. It usually appears as lymph node involvement or extranodal infiltration (soft tissues, bones, skin).

Case Report

43 year old man was admitted to the Haematology department in order to complete the diagnosis (previously seeking help in many places - family doctor, dermatologist and general surgeon) and begin with systemic treatment. Our patient has several chronic illnesses including: diabetes mellitus type 2, arterial hypertension and nephrotic syndrome. From the interview we got to know that for about 4 years he has been experiencing enlargement of the infiltration located on the right leg, starting with red follicular skin changes. Since 2019 we've noticed a massive infiltration with ulceration in the same limb. At this time the patient was treated with antibiotics unfortunately without any success. During the diagnostic process the biopsy has been done and the final diagnosis was established - infiltration of precursor B cell lymphoblastic lymphoma (IHC: CD20+/-, Tdt+, PAX5+, CD34+, bcl2+, CD10+). Additionally the man reported systemic symptoms such as unexplained weight loss equal to 10kg and night sweats. Throughout the hospitalization the biopsy has been redone so as to evaluate BCR-ABL mutation (negative), the MRI of the right leg has been done as well as whole body CT. The patient has been qualified to hyperCVAD/RMA therapy. The man shows good toleration to the proposed treatment.

Conclusions

Our patient had a lot of luck, due to the fact that patients with this type of NHL have the survival rate ranging from several to a dozen weeks. The quick introduction of chemotherapy conditions the better chance for cure.

[968] An unconventional approach to the rare unresectable tumor - a case study of sinonasal neuroendocrine carcinoma therapy

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Background
Sinonasal neuroendocrine carcinoma is a rare neoplasm of epithelial origin. Due to its aggressive character and nonspecific symptoms, the diagnosis is often established in an advanced stage and is associated with a poor prognosis.

Case Report
A 37-year-old man presented to the emergency department due to a sudden deterioration of visual acuity in the right eye. CT scan and MRI with contrast revealed a tumor located in the anterior cranial fossa, cranial base, nasopharynx, paranasal sinuses, nasal cavity, and orbits with extensive infiltration. Pathological examination of the biopsy specimen showed a sinonasal poorly differentiated neuroendocrine carcinoma T4N1M0. Due to the advanced stage, the possibility of resection and effective radiotherapy was ruled out. The histological type of cancer was a premise for enrollment of the patient for chemotherapy in the EP scheme (cisplatin and etoposide). Twelve days after the first course, the patient was admitted to the hospital due to an episode of impaired consciousness, progressing symptoms of frontal lobe syndrome, and pneumocephalus. The patient underwent endoscopic endonasal skull base reconstruction. After recovery from the surgery, the treatment was continued and the patient received a total of 6 courses of chemotherapy. The response was scarce, therefore radical radiotherapy was selected as the next line treatment. Subsequent lack of effect led to 177Lu-DOTA-TATE therapy after detection of somatostatin receptors in 68Ga PET/CT. One cycle was administered; however, treatment was discontinued due to insufficient response. The genetic panel did not show any targets for tyrosine kinase inhibitors but revealed IDH2 mutation as a potential aim for targeted therapy.

Conclusions
There is a lack of compromise regarding the therapeutic strategies in patients with sinonasal neuroendocrine carcinoma. The common approach includes surgery and chemo- and/or radiotherapy. The presented case shows therapeutic challenges in an unresectable tumor. Due to an extensive infiltration and proximity of critical structures, the surgery was not possible. Establishing the treatment plan required medical consultation of the interdisciplinary team and led to the implementation of unconventional therapy with hot somatostatin analogues. Nevertheless, no treatment was effective in this case.

[971] Cardiomyopathy as an adverse effect of Interferon-1b therapy in Multiple Sclerosis in young adult.

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Background

Multiple sclerosis (MS) is an immune-mediated inflammatory demyelinating disease of the central nervous system (CNS) that is a leading cause of disability in young adults. Disease-modifying therapies (DMTs) are the initial treatment of relapsing-remitting multiple sclerosis (RRMS). The first disease-modifying medication approved for use in MS was recombinant human interferon beta-1b (INFÎ¸-1b). The most common adverse effects of INFs are injection site reactions and flu-like symptoms.

Case Report

18-year-old female patient was diagnosed with MS in 2010. However, primary demyelination lesions were spotted on MRI performed because of several headaches in 2009.

The patient was qualified for INFÎ-1b (Betaferon) treatment after a relapse manifesting as retrobulbar optic neuritis, which was treated with IV methylprednisolone with good outcome. The tolerance to IFN was good and no progression of MS in CNS imaging was spotted for 4 years. Minor injection site reactions and flu-like symptoms occured during this time.

In march 2014 the patient was hospitalized in National Institute of Cardiology due to symptoms of heart failure (dyspnea, orthopnea and thoracic pain). Cardiomyopathy of unknown origin was diagnosed with EF=20%, NYHA II/III and LV=65mm. Discontinuation of INF therapy was decided due to possible cardiotoxicity. Because of heart dysfunction, the patient was qualified for implantation of a cardioverter-defibrillator (ICD MRI safety). The operation was performed on July 2014.

The patient was not qualified for refunded natalizumab treatment. In 2016 dimethyl fumarate therapy was started (Tecfidera). She remains under the are of Neurological Clinic in Military Institute of Medicine in Warsaw.

Conclusions

IFN is not listed as a medication associated with cardiomyopathy. However, this condition is mentioned as an extremely rare negative side effect in Betaferons (INN-recombinant INFÎ¸-1b) Summary of The Product Characteristics. If the causal link between taking this medication and cardiomyopathy is proven, the treatment should not be continued.

While searching through PubMed, only 1 case report of cardiomyopathy after INFÎ¸-1a and 1 case after INFÎ± injection were found. This suggests that this adverse effect is unique and the casual link is not obvious.

[998] Iron wire phlebitis - a disease of underestimated significance

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Background
Mondor's Disease (MD), also known as iron wire phlebitis, is a rare and self-limiting superficial vein thrombophlebitis that presents with a palpable cord-like induration beneath the skin. Others symptoms include: pain, swelling and redness of the affected area. It typically affects the vessels of the chest wall, less frequently the vessels of the penis or the upper limbs. The etiology of the disease is not fully understood, but it is known that it may be caused by local injuries or surgeries, and it may accompany cancer or infections. The diagnosis is based in most cases on an anamnesis and physical examination, confirmed by ultrasound. There are approximately 500 cases of this disease described in the literature. Iron wire phlebitis is a disease of underappreciated importance, raising awareness of this condition can facilitate the MD' diagnosis and reduce unnecessary diagnostic procedures.

Case Report
A 36-year-old female patient detects a lump during breast self-examination. The lesion was located in the upper outer quadrant of the right breast. The ultrasound revealed a longitudinal thickening going radially towards the areola, there was no flow in Colour Doppler, the change wasn't susceptible to pressure. That description corresponds to a dilated venous vessel with thrombosis, which led to diagnose Mondor's Disease. In this case the cause of increased coagulation may be ablation (02.2021) or COVID-19 infection (03.2021). It is necessary to find the etiological factors predisposing to the disease, and extending the diagnosis to exclude other rheumatological, hematological and neoplastic diseases. The patient received LMWH (s.c., 10 days), heparin ointment, painkillers and anti-inflammatory drugs. After one week treatment, the change wasn't palpable. Then, instead of LMWH, oral sulodexide was used for treatment.

Conclusions
Thanks to awareness of this disease, it was possible to made an appropriate, quickly diagnosis and implement treatment, as well as reduce unnecessary medical procedures. The early diagnosis of MD can help to identify serious causes (for example breast cancer) at an early stage which will allow to treatment previously undetected changes.

[1041] Hide-and-seek with adrenocortical carcinoma - a late diagnosis case study

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Background

Hypercortisolemia remains an under-diagnosed condition, which in turn postpones the diagnosis of its underlying cause. For instance, it can be caused by adrenocortical carcinoma, a rare endocrine malignancy with an annual incidence of 0.5-2 cases per million. Its early symptoms may be non- characteristic and at the same time hypercortisolemia may constitute the only manifestation of the disorder, successively making therapeutic error possible.

Case Report

A 72-year-old previously healthy woman presented to a GP with proximal muscle weakness, skin redness and dryness, swelling and changes in her appearance, with emphasis on body proportions. She was also consulted by a psychiatrist due to suspected depression. After a year of diagnostic process, the GP came to suspect hypothyroidism. A levothyroxine substitutional therapy was introduced.

Despite the treatment, the patient did not notice any alleviation of her symptoms. Thus, she consulted an endocrinologist privately, who at first sight recognized a typical picture of hypercortisolism. She was then referred to an Endocrinology Clinic where complex diagnostic procedures were performed - multiphase CT scan and extensive laboratory tests, including dexamethasone suppression test. In the Clinic the following syndromes were diagnosed de novo: ACTH-independent Cushing syndrome, type 2 diabetes mellitus, stage 2 hypertension, osteoporosis and hyperlipidemia. The multiphase CT scan showed a large tumour (9,0cm x7,2cm x8,9cm) with numerous, dissipated lesions, corresponding to an advanced adrenocortical carcinoma, which was subsequently confirmed histopathologically. With cisplatine, mitotane and metyrapone treatment introduced, the patient's life was prolonged significantly despite her metastatic disease.

Conclusions

It is important to raise awareness among various specialists of the hypercortisolism symptoms and its differential diagnosis. An early diagnosis, including one at first sight, is likely to improve the patient's outcome and is a valuable asset, a true gamechanger.

[1052] Clinical approach to a pulmonary embolism with N-butyl-2-cyanoacrylate in a 46 years old woman - a case report

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Background
Iatrogenic pulmonary embolism (PE) is an uncommon, yet potentially life-threatening condition. Mostly, it occurs due to migration of fragments of surgical devices to the pulmonary arteries, but it can also be a complication of tissue adhesives injection.

Case Report
Herein, we present a case of a 46-year-old female patient with autoimmune hepatitis who was treated for duodenal varices with endoscopic injection sclerotherapy using N-butyl-2-cyanoacrylate as a sclerotic agent. Following the procedure, a computed tomography angiography (CTA) check-up scan revealed the presence of an embolic material in the branches of both pulmonary arteries, yet the patient was discharged home due to good overall condition. Unfortunately, twenty days later the patient was re-admitted due to dyspnoea, cough and pleuritic chest pain. On physical examination she was tachypnoeic and hypoxic. Repeated CTA exposed disseminated, hyperdense emboli in segmental and subsegmental branches of pulmonary arteries, confirming a diagnosis of an iatrogenic PE with cyanoacrylate.
The patient was consulted within the local Pulmonary Embolism Response Team. Given the haemodynamic stability, as well as the lack of laboratory and echocardiographic features of right ventricle dysfunction, the risk of interventional therapy was assessed to be higher than the risk of death and a decision was made to continue with the supportive therapy and a series of check-up examinations. Detailed follow-up of the patient's condition which took place over the following twelve-month period confirmed that the right path of management had been taken.

Conclusions
This case underlines the challenges in the management of iatrogenic PE, which remains unstandardized. Consultation in a multidisciplinary team should be an important part of a decision-making process to determine whether interventional therapy or non-interventional approach is more beneficial to the patient.

[1060] A 52- year old patient with unresectable sarcoma- a spectacular response to the new treatment protocol (RT+HT)

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Background

The primary treatment for low-grade soft tissue sarcomas (STS) is tumor resection, in some situations combined with perioperative chemotherapy or radiotherapy (RT). However, low-grade STS seem to be chemo- and radioresistant. Thus, the management of locally advanced or unresectable disease is challenging. We believe that the addition hyperthermia (HT) to hypofractionated RT allow obtaining good local control with acceptable treatment toxicity (prospective phase II clinical trial SINDIR NCT03989596). The aim of the study was to present a case report from the aforementioned study of a patient with unresectable pelvic low-grade fibromyxoid sarcoma with almost complete response after RT+HT.

Case Report

: A 52- year old women was admitted to Maria Sklodowska-Curie National Research Institute of Oncology with a low-grade fibromyxoid sarcoma of pelvis. In magnetic resonance imaging (MRI) a 9 cm pelvic mass in contact with a right iliac bone was visible. The tumor was assessed as unresectable in the multidisciplinary team meeting. Due to the extent of the disease, anthracycline-based chemotherapy was proposed. She received three courses according to AI regimen (doxorubicin, ifosfamide), however, no satisfactory response has been achieved. Then participation in SINDR trial was proposed to the patient (December 2018). After obtaining an informed consent, she began the first part of RT+HT, namely 3.25 Gy per fraction to total dose 32.5 Gy + four deep HT (BSD-2000 hyperthermia system). The treatment tolerance was good, grade 2 intestinal and ski toxicity according to Common Terminology Criteria for Adverse Events v 4.0 was observed. After 6 weeks (February 2019), the next MRI revealed the tumor regression, however, only an attempt of very extensive surgery with permanent stoma was possible. Then it was decided to add a boost of RT+HT according to SINDIR protocol without surgery. She received 4 Gy per fraction to total dose of 16 Gy + two deep HT. CTC Grade 1 skin toxicity was noted. In September 2019 MRI showed significant tumor regression (4 cm size and fibrosis). In December 2019 a gradual regression of the tumor was observed. No late toxicity was noted.

Conclusions

The case shows that RT+HT may be an effective treatment in patients with locally advanced potentially chemoresistant STS. It provides a good local disease control with acceptable toxicity.

[1065] Metastasis of breast adenocarcinoma to pituitary adenoma

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Background

Metastases to the pituitary adenoma are an extremely rare clinical phenomenon and an uncommon location of intracranial metastasis. Contrary to adenomas, which are the most frequent neoplastic lesions of the pituitary gland and metastases to normal pituitary gland which account for 2% of all pituitary lesions, the only about 35 cases of metastases to pituitary adenoma have been described in the literature. The most typical metastasis to pituitary adenoma is lung, renal and breast cancer.

Case Report

A 61-years-old woman was admitted to the neurosurgery department due to headache and a significant degree of visual disturbance, progressing from 2-3 months. The neurological examination revealed temporal visual field defects. The patient had been treated for 8 months for advanced breast cancer with metastases to the bones and liver. The patient received treatment with HER2-targeting monoclonal antibodies pertuzumab and transtuzumab and also docetaxel. Magnetic Resonance Imaging (MRI) of the head revealed the 23x27 mm sellar mass with significant suprasellar extension. The lesion was isointensive on T1-weighted imaging and enhancement peripherally after contrast medium administration. The T2 - weighted image showed an intermediate signal intensity. The picture suggested a macroadenoma of the pituitary gland. The patient underwent endoscopic endonasal transsphenoidal removal of the lesion. The histopathological examination revealed ultrastructural features of two neoplasms occurring side by side - metastatic breast adenocarcinoma and gonadotroph pituitary adenoma. The histopathological picture of adenocarcinoma was consistent with breast cancer metastases. After the surgery, visual impairment and severe headache resolved, and the patient underwent stereotactic radiation therapy for stellar area (20Gy).

Conclusions

The clinical course and symptoms of pituitary adenoma metastases are similar to these of the parasellar tumors. The rarity of metastases to the pituitary adenoma, as well as the lack of specific clinical and radiological features, make it difficult to differentiate pituitary adenoma metastasis from other more typical pituitary lesions. In cases of atypical pituitary lesions in oncological patients, neurosurgeons should be especially careful and send the entire pathological masses for histopathological examination to allow the exact assessment of the two components of the tumor. The correct diagnosis could only be made thanks to the histopathological examination.

[1071] Myocardial and pericardial involvement as a rare lone manifestation of granulomatosis with polyangiitis

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Background
Granulomatosis with polyangiitis (GPA) is a condition affecting multiple organs and systems. Myocarditis is a rare complication of GPA, nevertheless capable of determining the outcome.

Case Report
We report a case of a 24-year-old male patient with a history of GPA diagnosed 2 years prior to the reported admission, who underwent immunosuppressive treatment and remained in remission for 12 months. The patient was admitted to the pneumology department with suspected relapse of the disease. The patient reported nonspecific chest pain, limited exercise tolerance, dyspnea and palpitations. Since the disease relapse was initially excluded, the patient was referred to the cardiology department. The transthoracic echocardiogram (TTE) and cardiac magnetic resonance (CMR) were performed, revealing the hypokinesis of the interventricular septum and basal part of the left ventricle (left ventricular ejection fraction LVEF =47%), myocardial oedema, intramual and subendocardial areas of late gadolinium enhancement (LGE) as well as pericardial fluid and LGE in pericardial wall. Consequently, endomyocardial biopsy (EMB) was performed and confirmed chronic, active myocarditis. As a result, the treatment regimen with Prednisone, Rituximab and Metotrexate was applied. During 14-months follow-up relief of symptoms, LVEF improvement and no signs of cardiac involvement on CMR were observed.

Conclusions
This case highlights the possibility of lone myocardial and pericardial involvement in the course of GPA. Complete diagnostic workup involving imaging (TTE, CMR) and invasive procedures allowed for confirmation of the diagnosis and introduction of the disease-specific treatment. Combined immunosuppressive therapy led to significant clinical improvement.

[1094] Persistent secondary adrenal insufficiency in patient with history of lymphocytic adenohypophysitis

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Background

Lymphocytic hypophysitis (LYH) is a neuroendocrine disorder characterized by autoimmune inflammation of the pituitary gland with various degrees of pituitary dysfunction. It can heal with minimal sequela or progress to fibrosis and result in permanent hypopituitarism. In one of the types, lymphocytic adenohypophysitis (LAH), an early destruction of the ACTH-producing cells is characteristic. Other anterior pituitary hormones can also be affected but posterior pituitary involvement is absent or minimum.

Case Report

A 30-year-old female patient with a history of chronic autoimmune thyroiditis, insulin resistance, hypercholesterolaemia and obesity was diagnosed a few years ago with secondary adrenal insufficiency due to isolated corticotropin deficiency after a suspected LAH. She was admitted to the Department of Oncological Endocrinology for a cortisol stimulation test.

Previously, patient was hospitalized several times in 2016 in different hospital in order to carry out diagnostics of her chronic fatigue, drowsiness and dizziness - there she was diagnosed with secondary adrenal insufficiency due to reduced cortisol levels along with inadequately low ACTH levels. Additionally, a pineal gland cyst (size:12x6x7mm) was discovered and since then observed under supervision of Department of Neurosurgery. Since diagnosis patient used hydrocortisone in dose of up to 20mg per day.

In January 2021, cortisol stimulation test was performed, in which a normal increase in cortisol concentrations was observed which confirmed an adequate adrenal reserve.

However, decreased levels of cortisol in the morning were observed twice with the accompanying lower concentration of ACTH (26.2pg/mL) - confirming the maintenance of the diagnosis of secondary adrenal insufficiency after almost 5 years since the suspected LAH.

Laboratory tests performed during hospitalization showed normal androgens levels ruled out hyperprolactinemia. Thyroid ultrasound examination confirmed features of chronic autoimmune thyroiditis.

Conclusions

After suffering from pituitary inflammation, the insufficiency of the corticotropic axis due to isolated ACTH deficiency may persist for many years. Adequate hydrocortisone substitution seems to be of key importance. Also patients with conditions such as autoimmune thyroiditis are at increased risk for other autoimmune diseases, even as rare as LAH.

[1119] A 51-year-old patient with metastasis to the frontal bone as the first manifestation of follicular thyroid cancer

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Background

Follicular thyroid cancer (FTC) arises from follicular cells of the thyroid. It is the second most common type of thyroid cancer, making up about 10 to 15% of all thyroid cancers. Usually occurs in adults aged 50 and older. Thyroid metastases at early stage are uncommon. Cranial metastases occur very rarely, with incidence of 2.5-5.8% and usually are located in occipital and temporal areas.

Case Report

In April 2017, a 51-year-old female was admitted to the hospital due to recently discovered mass in the right frontal region. The patient underwent surgery in which solid mass fixed to the frontal bone and dura mater was successfully removed. At the time, differential diagnosis included malignant meningioma or osteosarcoma. One month later the patient was admitted to the hospital with the diagnosis of secondary malignant tumor of brain and meninges. The patient underwent palliative radiotherapy. In the meantime, histopathological examination of resected tumor revealed a metastasis of FTC. Due to that, in July 2017, the patient underwent total thyroidectomy. Biopsy of thyroid confirmed presence of FTC. In right lobe FTC angioinvasion was discovered. In November 2017, the patient was admitted to the Warsaw Oncology Center in order to carry out scintigraphy. The images revealed numerous pathological concentrations of radioactive iodine in the bones of the neck, cranium, thoracic vertebral column, left femoral joint, right scapula and left humerus. The patient was qualified for radioiodine therapy and since December 2017 three courses of 131I therapy took place. A diagnostical post-therapeutic scintigraphy revealed a significant reduction in the uptake of radioiodine in the bone metastases and the patient observed a significant reduction of pain.

Conclusions

This case reminds us that sometimes metastases can be the first manifestations of cancer.
It is extremely uncommon for FTC to metastasize into frontal bone, nevertheless it shows that a variety of tumors should be taken into consideration when proposing a diagnosis. Radioiodine therapy is the only solution in patients with bone metastases that are not manageable with surgical resection and in this case the treatment helped to reduce the size of metastases and to relieve the pain.

Lifestyle Medicine
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Date:

Sunday, 30th May 2021, 9:30 AM

Jury:

prof. dr hab. n. med. Joanna Gotlib
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[790] Will application of artificial intelligence in medicine revolutionise the medical profession?

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Introduction

Since the dawn of medicine trust and direct contact with a medical professional has had a fundamental meaning owing to the fact that the profession is connected with protection of the most important values for humans - health and life. As technology has advanced, it became possible to use artificial intelligence (AI) in the treatment process. On the one hand, it is believed to make physicians' work easier, but on the other hand AI is a source of concern.

Aim of the study

The aim of the research was to analyse the opinion of Polish medical students on application of artificial intelligence in medicine.

Materials and methods

The data included in the research was obtained from 239 (100%) medical students of whom 171 (71,5%) were female and 68 (28,5%) male. A large majority of the respondents - 224 (93,7%) was at the age of 18-24, more than three-quarters - 191 (79,9%) lived in a town or city. An original questionnaire, created in Google Forms, was used as a research tool. The survey was distributed among medical students across Poland.

Results

Almost all of the respondents - 233 (97,5%) found artificial intelligence to be useful in some of the specializations in the future. While nearly two-thirds - 155 (64,9%) believed that physicians could not be replaced by AI in any of the specializations, a vast majority of the answerers - 206 (86,2%) thought that artificial intelligence would facilitate doctors' work. Students' opinions were divided on several aspects, for example, about the same number of them considered AI usage in medicine to reduce patients' trust in doctors - 91 (38,1%) as to increase it - 83 (34,7%). What is more, slightly more than a half - 122 (51,1%) thought that AI would have a positive impact on doctor-patient relationship. Surprisingly, a large majority of the students - 198 (82,8%) did not think that AI application would result in change in the number of physicians.

Conclusions

The majority of respondents is of the opinion that personal contact between the patient and the doctor is essential during the therapeutic treatment. Vast majority observed a number of benefits related to AI application in medicine. More than one-third of participants took notice of potential loss of patients' trust towards doctors, however nearly the same number of respondents believed the opposite.

[809] Awareness of mycetoma patients about causes and routes of transmission of the disease

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Introduction

Mycetoma is a chronic infection of skin and subcutaneous tissue. It can be caused by fungi or bacteria. It characterized by combination of painless subcutaneous mass, multiple sinuses and discharge containing grains.

Aim of the study

The primary objective of this study is to evaluate knowledge of mycetoma patients about the disease, causes, transmission and preventable methods.

Materials and methods

The research was questionnaire study conducted on 50 of mycetoma patients in El- gezira state, Sudan.

Results

62% of patients have eumycetoma and 50% of patients in the right foot and 42% affect the left foot and 8% affect others area. 58% of patients don't know about the disease being. Furthermore, 68% of patients don't know how the disease transmit.In addition, 82% of them don't know about the causes of the disease. Finally, 54% of patients don't do anything when they injured and 52% don't aware about preventable methods.

Conclusions

Study shows that more than 50% of patients lack of knowledge about the disease, route of transmission, causes and preventable methods. Due to these reasons, mycetoma disease distributes among people and the morbidity caused by mycetoma is extensive. From this study, wide health education is the best solution to decrease the incidence and prevalence of mycetoma disease in Sudan.

[819] In search of an adequate tool to measure childhood feeding experiences in adults

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Introduction

Parental feeding practices (PFP) are a well-known determinant of children's eating behavior. Several studies indicate that PFP may influence eating styles in adulthood, yet knowledge on this subject is limited. Nevertheless, there are no available measures to assess adults' recollections of childhood feeding experiences, which indicates a need to develop such tool for better understanding of eating behaviors in adulthood.

Aim of the study

The aim of the study was to adapt the Comprehensive Feeding Practices Questionnaire (CFPQ) to measure adults' childhood recollections (5-10 years old) and to examine its psychometric parameters.

Materials and methods

The study was conducted in February 2020. The CAWI technique and quota selection were used to collect the data. The questionnaire, consisting of modified version of CFPQ (mCFPQ), questions on selected food groups intake and metrics, was administered twice over a two-week interval in a group of 500 adults aged 18-65. 443 participants (224 women and 219 men) were included in the final analysis. Confirmatory and exploratory factor analysis (EFA), Cronbach's alphas, correlations among identified factors and discrimination capability were tested. Interclass correlation coefficients (ICC) were calculated to assess test-retest reliability.

Results

Out of 49 original items, 13 were eliminated, which resulted in a 39-item questionnaire - Adults' Memories of Feeding in Childhood (AMoFiC). EFA revealed a 5-factor structure, which were named as follows: „Restrictions" (13 items), „Healthy Eating Guidance" (9 items), „Pressure and Food Reward" (6 items), „Monitoring" (5 items), and „Child Control" (6 items). Statistical analysis proved satisfactory parameters of AMoFiC, including Cronbach's alpha values greater than 0.70, ICC values greater than 0.40 and lack of statistically significant correlations between factors. AMoFiC factors were found to differentiate intake of selected food groups. „Healthy Eating Guidance", „Monitoring", and „Restrictions" were related to higher consumption of fresh fruit and vegetables, whereas „Pressure and Food Reward" and „Child Control" were associated with higher intake of sweets and salty snacks.

Conclusions

The study results proved that newly developed tool AMoFiC can be used to measure adults' recollections of childhood feeding experiences. However, further studies are needed to confirm its properties.

[830] How physically active were Polish students during COVID-19 restrictions times?

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Introduction

COVID-19 pandemic and following restrictions have their impact on every life domain. Students are an especially affected group where social distancing, numerous quarantine periods and e-learning changed how lifestyle nowadays looks like.

Aim of the study

To assess how physically active were Polish university students during the normal week in the pandemic period (since 20th March 2020 to 20th March 2021.).

Materials and methods

An online based survey was sent via different social media channels (e.g.: Facebook groups and e-mail newsletters etc.). Data were collected from 1491 Polish undergraduates and 1200 met all study conditions (80,48%; 77,25% were females, 22,25% males, 0,5% didn't specify gender; 49,75% were medical university students). The questionnaire included IPAQ- Short Form and one author's question. Respondents declared BMI and the amount of weekly physical activity (number of active days/week, active type and time every day, sitting hours and summary question in -5/0/+5 scale in which they compared activity changes with times before restrictions). Finally, we calculated the total MET-min/week for each one.

Results

33,17% (n=398) of students were in a low physical activity group, 41,42% (n=497) in a medium and 25,41% (n=305) in a high. Average BMI was 22,26 kg/m$_{.}$ (13,62-48,29 kg/m$_{.}$). 11,5% (n=138) participants were underweight (BMI<18,5), 14,67% (n=176) overweight (BMI>25,0) and 3,92% (n=47) obese (BMI>30,0). Correlations between higher BMI (p=0,052) and gender (p=0,145) with lower PA level weren't statistically significant. 71,92% (n=863) reported that pandemic negatively influenced their physical activity level, 8,25% (n=99) didn't notice any changes and 19,83% (n=238) observed positive impact.

Conclusions

High number of Polish students didn't fulfill physical activity requirements to be described as medium or highly active people. Moreover most students saw negative changes in that lifestyle area during COVID-19 pandemic. Answers are not strongly dependent on the respondent's personal profiles (gender, BMI level etc.).

[861] Chronic venous disease - common and yet unknown - study of public awareness and primary symptoms in an assorted group of patients

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Introduction

Chronic venous disease(CVD) is thoroughly spread across the globe. It affects about 40% of polish population. European guidelines underline there is lack of data on the percentage of people who have first symptoms of chronic venous insufficiency.

Aim of the study

Determining the frequency and pattern of first symptoms and examine public knowledge on CVD in an assorted group of patients.

Materials and methods

Our study group consists of 175 patients, who took part in preventive assessment of nevi. To determine public knowledge on CVD, we constructed a questionnaire, which consisted of two sections. One part to be completed by the patient and the other by the doctor.

Results

The median age was 41 years old. From 175 patients, about 40% claimed they do not recognise CVD. Only about half of them knew how to diagnose and treat it. Most of them also could not associate first symptoms, even though most of them had primary symptoms of the disease.

Conclusions

Despite the fact that the disease itself is common, the level of public awareness is astonishingly low. In order to avoid high-cost treatment of ulcers and varicose veins, we should spread the knowledge on CVD.

[917] Knowledge and awareness among Polish women about umbilical cord blood banking

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Introduction

Umbilical cord blood is a source of hematopoietic stem cells. The procedure of its collection is safe and painless. Research on its use is being conducted and the number of diseases that may be cured using them is increasing. However, due to lack of funding, banking in Poland is mainly carried out by private institutions.

Aim of the study

To analyse the awareness and basic knowledge among Polish women about the possibility of postnatal tissues banking.

Materials and methods

The study was conducted using an online questionnaire addressed to Polish women who at that time were or had been pregnant. It consisted of 46 questions regarding demographics, information about pregnancy, knowledge of postnatal tissues banking and institutions providing it. Women were asked about the sources of information they rely on and reasons for considering this possibility. Data were collected from 25/11/2019 to 04/02/2020.

Results

The survey was completed by 1051 women. The dominant group of respondents were women between 26 and 35 years of age (67.7%). 34.4% of them were pregnant at the time of filling out the questionnaire. 93.8% of women were aware of the possibility of banking postnatal tissues. 46.4% knew about it before pregnancy, 44.7% gained this knowledge during it. The main sources of information included: Internet (54.5%), antenatal classes (30.3%), stem cells banks (16.9%). Only 11.2% claim that the doctor was their first source of advice.

20.4% of respondents believe that their knowledge of cord blood banks is insufficient. 7 out of 10 searched for information themselves, but only every fifth of them asked medical staff.

Cord blood banking was considered by 46% of respondents, and one in ten decided to do so in previous pregnancies. They perceived it mainly as protection for their family.

Almost every fourth (24.1%) respondent did not understand the difference between public and private banks. The vast majority (77.1%) would be willing to donate cord blood for scientific purposes.

86.2% of respondents knew that the collection is safe and painless. 92.9% gave the correct answer to the question when and 86.8% in which cases it takes place. However, they had a problem to state clearly, which tissues contain cord blood and how long it can be stored.

Conclusions

Polish women do not have sufficient knowledge about the procedure of banking and the use of postnatal tissues. However, this issue has become very popular among pregnant women.
It seems that the medical staff provides too little information on this procedure.

[922] Awareness and Practice of Antenatal Care Among Married Male of Nepal

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Introduction
Antenatal care (ANC) is the care provided by skilled health-care professionals to pregnant women in order to ensure the best health conditions for both mother and child during pregnancy. In South Asian context, men possess comparatively little knowledge and experience regarding maternal health. Due to lack of proper understanding regarding the complications and danger signs of pregnancy, perinatal care has been frustrating and difficult for husbands.

Aim of the study
To assess awareness of ANC in married male population of Letang Municipality and to associate with various socio-demographic factors.

Materials and methods
A cross-sectional study was carried out in married, male population of Letang municipality of Morang district. Simple random sampling technique was used to select 342 respondents and semi-structure questionnaire with face-to-face interview technique used for data collection.

Results
Most of the men had heard about ANC (84.5%), and a majority of them thought that ANC was necessary during pregnancy. About 60.5% respondents had knowledge regarding the danger signs of pregnancy with severe abdominal pain as the most common answer. Majority of the men accompanied their wives during ANC checkups, with 50.6% being unable to do so, due to being busy with employment or were foreign workers. There is significant association of education and occupation with knowledge of danger signs of pregnancy.

Conclusions
Most respondents had knowledge regarding the danger signs of pregnancy and had heard about ANC. They had a firm belief in ANC and had a positive attitude towards it in general.

[1001] How SARS-COV-2 pandemic appeal to studing medicine in Poland

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Introduction

The COVID-19 pandemic affecting our society in March 2020. Polish medical universities have been forced to make educational changes to ensure continuity of learning.

Aim of the study

Ask the students how they evaluate the different forms of e-learning and to know what what should be changed to achieve the best educational results.

Materials and methods

survey posted on student forums from December 2020 to January 2021. It was completed by 615 medical students. Methods Statistica 13.0 Program, Student's t-test the Mann-Whitney U test

Results

The level of satisfaction with the remote form of lectures was very good (59.67%) and good (18.70%). The students' opinion of the seminars was similar, they rated them very good (25.20%) and good (26.02%). Student opinion was significantly different in the clinical classes, was rated very bad (27.64%) and bad (35.28%).

Students evaluated significantly better the classes that took place in a stationary form, compared to online classes (43.3% of neutral opinion and 25.91% of good opinion vs. 32.36% neutral and 27,48% of good opinion, respectively).

Students assess their sense of adequate preparation for the profession, it was evaluated negatively, by as much as 71.06% of respondents. Unfortunately, 27.3% of students learned less during the pandemic and had to spend more time on self-studying - 21.713%.

Medical universities need to rearrange their abilities to use all available technological equipment and human resources to improve the educational effects - as 55.28% of participants chose that the universities did not undertake all the measures they could - 55.28%. Most students (45.2%) think that it is possible to maintain the quality of teaching (vs 40.16% who do not).

Conclusions

For Medical studies distance learning brings a lot of loss in the form of lack of hands-on learning opportunities, which implies concerns about the future profession. This makes us reflect and think about the currently implemented solutions. In our opinion, the university authorities, in the perspective of further remote learning, should jointly strive to achieve a compromise between remote learning and practical learning, so that it brings the greatest benefits to students and their preparation for future profession.

[1018] Will adolescents visit their doctor again? An analysis of how teenagers from the Warsaw Agglomeration view their prophylactic medical examinations

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Introduction

Prophylactic medical examinations are a common experience to adolescents. Yet, little is still known about teenagers' attitude towards this component of preventive care.

Aim of the study

The goal was to assess adolescents' view of a prophylactic examination they underwent at the age of 15/16, and to determine the factors influencing the overall impression of the visit, as well as their willingness to participate in any future ones.

Materials and methods

A questionnaire developed on the basis of Polish Minister of Health's regulations, the Institute of Mother and Child's standards and the HEeADSSS assessment tool, was completed by 359 students from 11 schools in the Warsaw agglomeration. The survey comprised questions about teens' recent prophylactic examination. On a 5-point Likert scale, the students marked: overall assessment, respect for intimacy, physician's interest in the patient, benefits from the visit, willingness to participate again in a similar visit. The data were analyzed using Spearman's Ď and the Kruskal-Wallis test.

Results

The mean grade of the three out of five examined factors placed below the neutral score of 3. Benefits from the visit were graded the lowest (Mdn=2, M=2.24 SD=1.1), physician's interest in the patient the second-lowest (Mdn=3, M=3.11 SD=1.1), and respect for intimacy was graded the highest out of all the factors (Mdn=4, M=3,78 SD=1.1). The overall assessment doesn't visibly deviate from other variables (Mdn=3, M=2.97 SD=0.9). The strongest correlation (Ďs=0.64 P<0.05) was found between the overall assessment and physician's interest in the patient. Low willingness to participate again in a similar visit stands out (Mdn=3, M=2,67 SD=1), with only 17% of the respondents ready to undergo another examination. It has been shown that willingness to participate in a similar visit correlates with physician's interest in the patient (Ďs=0.51 P<0.0001), respect for intimacy (Ďs=0.35 P<0.0001), benefits from the visit (Ďs=0.49 P<0.0001), and the number of subjects raised during the interview (Ďs=0.16 P=0.0019).

Conclusions

The adolescents' overall assessment of their prophylactic examination is neutral, with benefits from the visit scoring the lowest. The overall assessment is most visibly influenced by physician's interest in the patient, whereas adolescents' willingness to participate again is significantly determined by physician-dependent factors: physician's interest in the patient, number of subjects raised during the interview, respect for intimacy.

[1076] Ophthalmic complications of pregnancy among diabetic women

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Introduction

Pregnancy among women with Diabetes Mellitus (DM) is an interdisciplinary challenge for physicians of diverse specialties, as it increases the risk of potentially irreversible complications. That includes vision loss due to diabetic retinopathy, which radically decreases the patients' quality of life.

Aim of the study

The aim of this study was to assess the prevalence of and the knowledge about ophthalmic complications among diabetic women during pregnancy.

Materials and methods

The study group consisted of 68 women aged 22-50, who filled out an online questionnaire. The questions regarded the most recent pregnancy. The inclusion criteria (IC) were: women with DM (type 1, type 2, MODY), who are or have been pregnant. 22 of the replies have been disregarded due to incompatibility with the IC. The results were analyzed with a spreadsheet.

Results

Among the respondents, 67% of women suffered from DM type 2, 22% from DM type 1 and 7% from DM MODY. 87% of women were aware, that pregnancy could influence their vision, but only 41% were referred to an ophthalmologist by their obstetritian-gynaecologist (OB-GYN). The majority of responders (77,9%) was not informed by their OB-GYN about the risk of possible new ophthalmic complications, or worsening of the current ones. The most common ophthalmic symptom reported by the patients was blurred vision. After labor, 13% of women suffered long term vision impairment.

Conclusions

Pregnant, diabetic women require ophthalmologic care and should be referred to an ophthalmology specialist. Additionally, they should be informed by the OB-GYN about the risks of pregnancy in their condition, so that this awareness encourages them to seek treatment if any ophthalmic symptoms occur.

[1095] Does knowledge about HIV infection and attitude towards people living with HIV affect testing?

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Introduction

Among the WHO European Region countries, Latvia has one of the highest rates of newly diagnosed HIV cases per 100 000 inhabitants. There are 21 "HIV Prevention Points" (HPP) across the country that offer free of charge and confidential HIV rapid tests; however, testing coverage remains low. HIV stigma and lack of knowledge are factors that may reduce testing and contribute to the spread of HIV infection.

Aim of the study

To assess the population's knowledge about HIV, attitudes towards people living with HIV and whether those factors influence HIV testing behaviour.

Materials and methods

A cross-sectional study was performed. The data was gathered through an online survey. The questionnaire included five UNAIDS indicator questions to assess HIV related knowledge; three questions were used to identify HIV related stigma. Chi-square test and univariate analysis were used to gain results.

Results

386 people participated in the survey, aged 18 - 68 (mean age 32.6). 49.5% of the participants had a higher education, and 47.4 % had never been tested for HIV. Most of the respondents (90.2%) had already engaged in sexual intercourse. Among them, only 21.3% reported consistent condom use. Half of the respondents (49%) were aware of the HPP and free testing. 53.4% of the participants qualified as having "sufficient knowledge" (answered correctly to all five questions). For those with insufficient knowledge, the odds of taking HIV test were reduced by 50.4% ($p = 0.001$; OR=0.5, 95% CI 0.33 - 0.7). If a person had stigma, they were 48.8% less likely to get tested ($p = 0.009$; OR=0.5 CI 0.3 - 0.8). Almost one fifth (18.7%) would not agree that HIV infected child goes to school together with their child. 13.7% of the participants would not work with HIV infected person. 1.8% would not accept HIV positive family member.

Conclusions

The results imply that a lack of HIV related knowledge and negative attitude towards people living with HIV statistically significantly and negatively affects HIV testing. To achieve the goal set by UNAIDS - 95% of HIV positive people knowing their status, there is a need to educate the public more effectively.

[1112] Does physical activity reduce the risk of mood disorders among women with Polycystic ovary syndrom?

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Introduction

Polycystic ovary syndrome (PCOS) is the most common endocrinopathy in women of reproductive age, characterized by hyperandrogenism and chronic anovulation. Studies have shown a high prevalence of mood disorders in patients with PCOS. It is proven that physical activity has positive impact on mental health by reducing anxiety, depression, and negative mood in general population. Physical activity is currently presented as the first and most effective strategy for PCOS resulting in improvement of metabolic disorders.

Aim of the study

The aim of the study was to examine the additional beneficial effect of physical activity on reducing the risk of mood disorders in women with PCOS.

Materials and methods

The survey was performed by the Internet among adult women diagnosed with PCOS. Study questionnaire included 41 questions concerning the sociodemographic and clinical data. Mood disturbances were examined on the basis of Beck Depression Inventory. The physical activity was assessed by the frequency of performed exercises per week. The inclusion criterion was the diagnosis of PCOS. Patients taking antidepressants were excluded from the study.

Results

The study group included 671 women with PCOS in mean age 26.6 ŚĪ 4.8 years. Based on the used scales, it was determined that 27.0% of study group did not have any symptoms of depression, 28.3% have mild depression symptoms, 21.5% moderate and 23.2% severe. Only 21.5% of the participants did not undertake any physical activities. The Kruskal-Wallis test showed no statistically significant differences between the degree of depression and the frequency of performed physical activities ($p > .01$). The Spearman's rank test showed no statistically significant correlations between the degree of depression and the frequency of performed physical activities ($p > .01$).

Conclusions

The frequency of undertaking physical activity probably has no significant effect on reducing the risk of depression evaluated in the Beck Scale. Further research should be conducted.

Neurology & Neurosurgery

Date:

Saturday, 29th May 2021, 8:30 AM

Jury:

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[783] Management of epilepsy during Covid-19 pandemic - the patient's perspective

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Introduction

On March 11th, 2020 the World Health Organization announced Coronavirus Disease 2019 (COVID-19) as a global pandemic. Although there is no clear connection between COVID-19 and epilepsy, anxiety and insomnia are more likely to occur, so does an increase in self-reported stress, which are believed to be common triggers for epilepsy.

Aim of the study

The aim of the study is to establish the impact that COVID-19 had on the course of epilepsy in children.

Materials and methods

Patients with epilepsy diagnosis attended to developmental neurology ambulatory in period March 2020 to December 2020 were collected. As patients were minor, legal guardians were asked about filling questionnaire. Response rate was 70.04%, eventually 402 questionnaires were collected. It consisted of four sections: demographic data, epilepsy course and treatment, medical care during pandemic and additional information. Patients were divided into three groups: "Worsen", "No change" and "Improvement" of epilepsy course, considering seizures frequency, duration of seizures and new types of seizures. Statistical analysis was performed using the Kolmogorov-Smirnov test.

Results

12.9% of participants had improvement in epilepsy course, while worsen of disease was seen in 16.4% of patients. Age, sex, type of epilepsy and duration of disease had no statistically relevant correlation with changes in epilepsy course. Significant differences between groups were found considering changes in child's behavior and sleep disturbances. Attending to school/kindergarten was associated with worsen of epilepsy course. Drugs prescribed before the pandemics controlled the seizures successfully in 61.5% of the patients in the Improvement group and 53.0% of the Worsen group. Presence of infection during COVID-19 pandemic had no statistically significant influence on epilepsy course.

Conclusions

Stress and social distancing may be a reason of poorer seizures control in patients experiencing epilepsy. All of those modified factors appear to have more impact on epilepsy control than course of the disease before pandemic. Medical care should be provided regularly and put emphasis on physical state od patients.

[784] Telemedicine in epilepsy - is it equally effective for patients and doctors?

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Introduction

In 2020 Coronavirus Disease 2019 (Covid-19) was announced as a global pandemic. Implications that followed this declaration were devastating to social and health factors. To avoid direct contact with patients, for their safety and safety of the healthcare providers, clinical care had to be shifted towards telemedicine. That affected especially patients struggling with chronic disease, such as epilepsy, which requires frequent follow-up consultations to provide adequate patients care.

Aim of the study

The aim of the study was to evaluate effectiveness and patients' satisfaction with telemedicine.

Materials and methods

Patients with epilepsy diagnosis attended to developmental neurology ambulatory in period March to December 2020 were collected, in total 402 patients; 341 patients had at least one telemedicine appointment. As patients were minor, legal guardians were asked about filling questionnaire consisted of four parts: demographic data, epilepsy course before pandemic, changes in epilepsy course, telemedicine satisfaction. Patients were divided into two groups "satisfied " and "not satisfied" with telemedicine. Statistical analysis was performed using the Kolmogorov-Smirnov test.

Results

199 of patients (58.3%) claimed online visits were as efficient as the standard medical appointments. There was no connection between epilepsy control, changes in epilepsy course or seizures frequency and satisfaction from telemedicine. The differences between group "satisfied" and "not satisfied" were found considering changes in medical appointments frequency and cancelling teleconsultation by the doctor. There was no connection between satisfaction and age, sex, epilepsy type or duration of the disease; 24% of satisfied patients and 28% of dissatisfied needed urgent hospitalization or consultation during pandemic. Almost all patients (98%) from the first group got the help, while 32% patients from "not satisfied group" did not manage to talk with healthcare provider. There was no connection between epilepsy control or changes in epilepsy course and satisfaction from telemedicine.

Conclusions

From the medical point of view telemedicine seems to be efficient tool for supervising patients with epilepsy. However, almost a half of the patients is not satisfied with telemedicine. Physicians should pay attention to appointments frequency and remember to set another day of consultation in case of cancellation. Patients should be informed about possibilities of medical help in case of urgent situation.

[823] Investigation of an early phase of hemodynamic response to trigeminal nerve stimulation in young healthy subjects.

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Introduction

Stimulation of trigeminal nerve (TGS) in facial area (e.g., facial cooling - FC) causes a complex hemodynamic response, its best-known features being bradycardia and an increase in mean arterial pressure. Although there have been several studies performed on trigeminal cardiac reflex, only a few have included pulse wave analysis (PWA). PWA enables obtaining parameters that reflects hemodynamic changes in aorta during the cardiac cycle.

Aim of the study

To examine an early phase of central hemodynamic response to facial cooling in young, healthy subjects.

Materials and methods

15 volunteers with no cardiovascular diseases aged 18 to 25 (males: 10) were enrolled into the study. After 5 min of rest in supine position, brachial BP was measured, and pulse waveform was recorded using applanation tonometry. Then participant was exposed to 15-second FC (spraying with 4*C water and fanning), which was followed by second measurements. The following parameters were obtained: heart rate (HR), peripheral and central systolic pressure (SP) and diastolic pressure (DP), Tr (the time from the beginning of pulse wave to the beginning of reflected wave return) and cT2 (the time from the beginning of pulse wave to the reflected wave return).

Results

FC caused decrease in HR (77±9 bpm vs 67±10 bpm; p=0.004). Change in Tr was not statistically significant (153.8 ms vs 148.4 ms; p= 0.07) while cT2 increased (187±22.03 ms vs 198.6±27.9 ms; p=0.03). There was no significant change in peripheral and central SP (112.4±11.2 mmHg vs 113.3±9.5 mmHg p=0.5 and 94.9±8.8 mmHg vs 96.7±9.7 mmHg p=0.3), as well as in the central DP (69.3±6.2 mmHg vs 71.5±8.8 mmHg; p=0.09). However, there was a significant increase in peripheral DP (68.0±11.2 mmHg vs 70.8±9.5 mmHg; p=0.03).

Conclusions

There was a significant parasympathetic (manifesting in HR decrease) as well as sympathetic (causing increase in pDP) response obtained. Increase in the cT2 indicates that the accretion of reflected wave pressure has prolonged, which might be caused by increased compliance of aorta in an early phase of autonomic response to TGS. However, unlike in most other studies on FC, we haven't obtained a significant decrease in Tr. It remains unclear whether this result stems from insufficient sample size leading to lack of statistical significance or the fact that increased aortic compliance balances the effect of vasoconstriction of resistance vessels in young adults.

[829] Petroclinoid ligament and Dorello's canal anatomic variability and their clinical implications

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Introduction

The petroclinoid ligament (PCL) creates the roof of the Dorello's canal (DC). Close relationship with various significant anatomic structures, as the abducens nerve and the petroclival venous confluence, plays an important clinical role. From a surgical point of view, proper knowledge of these variations enable using PCL as a landmark in numerous neurosurgical skull base procedures.

Aim of the study

Our goal was to assess anatomic variability of the petroclinoid ligament (Gruber's ligament/PCL) and Dorello's canal with emphasis on their further clinical implications.

Materials and methods

We dissected 94 sides from 47 skull base specimens of adults (avg. age- 54,9 years; 36 males; 11 females). The arteries were injected with colored latex to facilitate the dissection. The PCL and DC area were dissected with microsurgical techniques using magnification 2-10X (OPMI PZO/Zeiss). We investigated: shape, structure and attachment points of ligament. Measurements of the PCL, DC and neighboring skull base structures were completed using morphometric software and microscope ocular ruler. Moreover, the angle and inclination of PCL according to the body planes were evaluated.

Results

We have observed all previously defined types of PCL, with the butterfly's type being most common (35,11%; n=33). In a few specimens the ligament was duplicated, ossified or hypoplastic. The mean length of the PCL was 12,9 mm (±2,4 mm). The PCL origin/insertion were significantly variable- petrous apex and its neighbouring bone to the area between posterior clinoid process and upper clivus. The DC was 1,7 mm (±1,2 mm) wide, 7,9 mm (±3,5 mm) long. PCL relation to the sagittal plane varies between specimens from 22°20'37" to 66°48'52" (avg.- 43°9'54") and is strongly dependent on location of the attachment points.

Conclusions

A petroclinoid ligament and a Dorello's canal are both highly variable structures. Specific anatomical configurations of these structures may influence the different susceptibility of the CN VI (located laterally or medially in DC) to injury during skull base surgical approaches and cranio-cerebral trauma.

[937] Safety and utility of implant removal after percutaneous osteosynthesis of type A thoracolumbar and lumbar fracture

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Introduction

Implant removal represents almost one third of all elective surgeries in spine surgery. There is no consensus regarding the time and need to remove the implants after vertebral fractures consolidation.

Aim of the study

The aim of this study was to assess the clinical and radiological effects of implant removal in patients with vertebral type A fracture who underwent a percutaneous intervention.

Materials and methods

We evaluated 31 patients (mean age of 38.2 ± 7.5 years) with thoracolumbar vertebral fracture (T11-L5) who underwent implant removal surgery after 24 months of fracture first surgery by a percutaneous approach. Inclusion criteria focused on patients' preferences. The radiological parameters included fracture angle, initial sagittal index, compression percentage, degree displacement and deformation angle. The clinical variables included Visual Analog Scale and Oswestry Disability index.

Results

There was no significant correction loss after removal surgery (before surgery and after 24 months): Fracture angle (16.8 ± 0.5 vs 17.1 ± 0.5; pËƒ0.05), initial sagittal index (12.5 ± 0.5 vs 12.7 ± 0.5; pËƒ0.05), kyphotic deformity (17.5 ± 0.6 vs 17.8 ± 0.7; pËƒ0.05), compression percentage (35.6 ± 0.8 vs 36.0 ± 0.7; pËƒ0.05), degree displacement (4.4 ± 0.4 vs 4.5 ± 0.3; pËƒ0.05) and deformation angle (23.0 ± 0.7 vs 23.1 ± 0.7; pËƒ0.05). Patients who presented symptoms before the surgery showed better Visual Analog Scale (1.2 ± 0.6 pre vs 0.6 ± 0.3 post, pË,0.05) and Oswestry Disability Index (20.1 ± 6.8 pre vs 15.7 ± 0.5, pË,0.05). No complications were reported.

Conclusions

Routine implant removal in patients undergoing a percutaneous approach to vertebral type A fracture is a safe technique and is associated with good clinical results without loss of radiological correction. In addition, this procedure could be indicated to patients who manifest symptoms since there is a clinical-radiological benefit.

[987] miR-19a-3p predicts stroke severity and miR-186-5p might be a diagnostic biomarker in ischemic stroke patients with hyper platelet reactivity

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Introduction

Ischemic stroke (IS) is one of the most frequent causes of death. In 2018, for every 6 deaths from cardiovascular disease, one was caused by stroke. Although there are well established treatment strategies diminishing post-stroke cell death, there are no available long-term diagnostic and prognostic methods to predict stroke severity. MicroRNAs (miRNAs) are a class of endogenous, non-coding RNA molecules. Since miRNAs have been illustrated to play an important role in various processes through regulation of multiple genes, and platelet function, their utility as novel biomarkers should be determined.

Aim of the study

We aimed to analyze the circulating platelet-derived miR-19a-3p and miR-186-5p expression levels 24-h and 7-days after IS as novel diagnostic and prognostic/predictive biomarkers.

Materials and methods

Blood samples of 28 patients diagnosed with acute IS with hyper platelet reactivity were collected 24-h and 7-days after stroke and 26 age- and gender-matched individuals free of stroke with multiple risk factors for cardiovascular disease. Plasma RNA was extracted from plasma and quality of RNA was assessed by fluorometric assay. Microarray and GEP analysis was performed using the Clariom D pico chips, analysed on the Affymetrix platform. RT-PCR was performed to validate the miRNAs. MiRNA related to platelet function were chosen among those with the most relevant modulation between the groups. Wilcoxon test was performed for miRNAs comparison time-point differences. Independent t test was used to compare between study and control group ($p<0.05$).

Results

MiR-186-5p levels were significantly lower in the study group 7 days post-stroke compared to healthy individuals ($p=0.007$). MiR-19a-3p levels were significantly lower 7 days post-stroke compared to day-1 of stroke ($p=0.003$). Moreover, patients with moderate stroke had significantly higher miR-19a-3p compared to patients with minor stroke ($p=0.032$). ROC analysis showed that miR-19a-3p can be a predictive biomarker for the severity of stroke ($p=0.025$). Importantly miR-19a-3p was negatively correlated with infarct size ($r=-548$, $p=0.006$).

Conclusions

Our analysis showed alteration of circulating miRNAs after IS. MiR-19a-3p might have a predictive value for stroke severity prognosis and miR-186-5p might be a novel diagnostic biomarker for IS patients with hyper platelet reactivity.

[988] Effect of cerebral palsy (CP) on immune system in children

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Introduction

CP is a group of permanent motor disabilities due to perinatal brain damage. Inflammation and leukocyte-associated genes were reported to be altered in infant twins discordant for subsequent development of CP in epigenetic study. Persistent inflammation has been reported due to 2-fold increased levels of TNF-a in pre-school and school-aged children with CP. Thus, we decided to verify effect of CP on sera markers in toddlers and school-aged children.

Aim of the study

To test effect of CP on cytokine, chemokine and growth factors' levels in children.

Materials and methods

Relative levels of 105 cytokines, chemokines and growth factors were evaluated in 14 children with CP and 15 age-matched healthy children. Pooled sera samples were analysed using Proteome Profiler XL Human Cytokine Array Kit, adapted according to the manufacturer's instructions to allow semi-quantification with Bio-Rad-Image-Lab-Software-6.0.1-Windows by chemiluminescence detection.

Results

14 children with CP compared to 15 age healthy children showed increased relative expression of 8 sera markers (CRP, BAFF, TARC, angiogenin, serpin E1, RBP-4, EGF, PDGF-AA), related to extracellular matrix (ECM) remodelling and consequent fibrosis.

Conclusions

CP affects immune status of children.

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[983] Food for thought - exploring connections between eating disorders, learning capacity and perfectionism amongst Warsaw students

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Introduction

Eating disorders are mental disorders which affect around 1-3% of the society. Research shows that these patients may often be perfectionists and have a strong strive for success.

Aim of the study

We aimed to estimate the prevalence of eating disorders among law and medical students and to assess their impact on academic achievements.

Materials and methods

A conducted questionnaire was based on the EAT-26 test, in which a score of 20 or more points indicates a high risk of eating disorders. The questionnaire also contained original questions about academic performance and behavioral patterns. 370 responses were collected from students of the Medical University of Warsaw and the Faculty of Law and Administration of the University of Warsaw. The data were analyzed using the Chi-square test and the Yates's correction for continuity.

Results

The study showed that 23.51% of polled students scored 20 or more points. However, only 11% of all students have been diagnosed with an eating disorder. Further analysis showed that 22% felt the urge to vomit after meals, and 16,5% actually did it. 83% said that they sometimes "think there is too much fat in their bodies" and 95% declared self-controlling during meals. A statistically significant correlation was found between the high EAT-26 score and perfectionism ($p=0.0085$) and unhealthy behaviors like vomiting, using laxatives or diuretics to lose weight or eating binges (all $p<0,0005$) which affected up to 55% of polled students. In some parameters (as being satisfied with their figure and feeling they sometimes could not learn as much as their academic teachers require) results differed a lot between law and medical students' populations. Others (like dread of being overweight; weight affecting their self-esteem) were on similar levels in both groups. Some individuals with a high EAT-26 score were more often unhappy with their learning outcomes and they needed more time to study certain topics than their peers.

Conclusions

The prevalence of eating disorders in polled students was higher than in the general population. An alarming number of students demonstrated incorrect thinking about their body and unhealthy behavioral patterns. Eating disorders also affect learning. Results of this study may be useful for university officials to increase education on that matter, pay more attention to students' eating behaviors and their attitudes towards academic performance, as many students feel they do not meet the requirements from their professors.

[972] Can being a Medical Student during COVID-19 be better for your Mental Health? Medical vs Non-Medical Students' Perceived COVID-19 Related Risks and Their Emotional State

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Introduction

Medical students report experiencing higher levels of mental distress than students from other fields. However, in stressful situations, i.e. pandemics, medical knowledge, and ease of understanding of the threat might be protecting factors.

Aim of the study

This study aimed to investigate the relationship between study field (medical vs non-medical), perceived risk of COVID-19 infection/fatality and emotions.

Materials and methods

Self-reported data from a web-based sample (N=4,071) of Polish university students aged 18-30 was collected between 25/04-11/08/2020, mainly (95%) during the nationwide quarantine. A self-designed questionnaire measured perceived risk of coronavirus infection and fatality for the student and respective age group (%) and emotions. SPSS 27.0 was used for statistical analysis. Independent Samples Tests and Mann-Whitney U Tests were used to check for differences between medical (n=1,628) and non-medical students (n=2,443) in emotions and assessments of coronavirus-related risks; Spearman's rho to investigate the correlation between perceived risks and emotions.

Results

Medical and non-medical students didn't differ in the level of perceived own risk of getting infected (34% in both groups, p=.999), but assessed risk for their peers getting infected as slightly higher (40% vs 37%, p=.003, r=-.05). Simultaneously, medical students assessed the risk of fatality lower than non-medical students, both for themselves (11% vs 16%, p<.001, r=-.11) and peers (10% vs 13%, p<.001, r=-.10). Medical and non-medical students didn't differ in negative emotions, but reported higher levels of positive emotions, all p<.001, Cohen's d .11 to .17. With exceptions, higher the perceived risks, higher the negative emotions, lower the positive emotions, all p<.02.

Conclusions

Medical studies have a significant but relatively small impact on their perception of coronavirus-related risks and mood, possibly protecting students from experiencing negative emotions and enhancing positive emotions.

Obstetrics, Perinatology & Gynaecology

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Saturday, 29th May 2021, 11:00 AM

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[786] Non-immune fetal hydrops: etiology, clinical strategy, outcomes.

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Introduction

Non-immune fetal hydrops(NIFH) is a condition in the fetus characterized by an accumulation of fluid in more than one extravascular space.The frequency of NIFP in the population is 0.05-0.5%.Mortality reaches 95%.

Aim of the study

To determine the causes of NIFH in order to timely prevent its development and improve perinatal outcomes.

Materials and methods

A retrospective analysis of 34 pregnancy and birth histories (2012-2017) was performed. Inclusion criteria: the presence of NIFH according to ultrasound investigation. Exclusion criteria: Rh-sensitization, hemolytic disease of the newborn.Screening for infection, antibodies to the Rh-factor, ABO; ultrasound and fetometry were performed. During karyotyping abnormalities were not found.

Results

The average age - 31±11 years. 33 (97.0%) pregnancies were complicated:threatened abortion - 12 (36.4%), congenital malformations - 10 (30.3%), acute respiratory infections - 9 (27.3%), twin-to-twin transfusion syndrome - 1 (3.0%), hepatitis A (HAV) - 1 (3.0%). Infection screening:cytomegalovirus (CMV) + herpes-1,2 - 26 (66.7%),CMV - 3 (12.5%), herpes-1,2 - 2 (8.2%),influenza viruses - 1 (4.2%), parvovirus B19 - 1 (4.2%), HAV - 1 (4.2%). The average period of NIFH signs detection - 26,5±11,5 weeks. According to ultrasound, fluid accumulation was detected in 27 (79.4%) fetuses in more than one extravascular space; ascites and hydrothorax - 22 (81.5%). Invasive methods of treatment were performed in 9 (26.5%) patients as symptomatic therapy: amniocentesis - 5 (55.6%), laparocentesis - 2 (22.2%), thoracocentesis - 2 (22.2%). By the use of these methods pregnancies were prolonged up to 32.5±5.5 weeks. In most cases (28-82.4%) pregnancies finished by operative delivery at 31±7 weeks. In 6 (17.6%) - through the natural birth canal (33±5 weeks). Perinatal mortality - 500.0€° (17 from 34): stillbirths - 10 (58.8%), early neonatal deaths - 7 (41.2%). 17 (50.0%) infants survived and were discharged from the NICU to the department of neonatal pathology.

Conclusions

The most common causes of NIFH - intrauterine infection (25-73.5%) and congenital malformations (8-23.6%). Invasive treatment methods as symptomatic therapy
helped to prolong pregnancies to the terms that guarantee low rates of perinatal mortality and morbidity (32.5±5.5 weeks). Chronic placental insufficiency was detected in 10 (29.4%) of the fetuses. It can be attributed to the factor of the NIFH severe course - all these babies were stillborn.

[812] Excessive gestational weight gain associated with risk of a complicated labor

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Introduction

Excessive gestational weight gain (GWG) has been associated with adverse infant, childhood and maternal outcomes. However, there is no consensus on the role of GWG in the development of complicated labor.

Aim of the study

The aim of the study was to evaluate the effect of excessive GWG on potential complications of labor.

Materials and methods

Prospective study included 225 primigravida with a singleton pregnancy, normal BMI without indications for elective cesarean section: 110 - excessive GWG and 115 - recommended (control). Analysis of terms and methods of labor induction, complications of labor and the final mode of delivery was performed.

Results

In case of excessive GWG delivery more often occurred after 40 weeks (75 - 68.2% and 63 - 54.8%, in the main and control groups, OR 1.8; 95%CI 1.0-3.2). Labor activity two times more often than in the control had to be induced (29 - 26.4% and 18 - 15.6 %,) (OR 2.0; 95%CI 1.0-4.0). The main indication for induction of labor was prolonged pregnancy (20 - 18.2% and 10 - 8.7%). In case induction of labor in GWG women in two times moredelivery was endedby caesarian section (12 of 29 - 41.4% and 4 of 18 - 22.2%). The main indications were cephalopelvic disproportion, severe preeclampsia, ineffective induction and abnormal uterine action. Excessive GWG two times increased the risk of uterine inertia, mainly primary (OR 2.0; 95%CI 1.1-4.1). Use of terotonics increased (38 - 34.5% in the main group and 22 - 19.7% in the control), (OR 2.2; 95%CI 1.2-4.3). Weight gain of 16.5 kg and more increased using of uterotonics by almost 2.5 times (OR 2.4; 95%CI 1.3-4.7). The total gain of 16.1 kg is critical for cesarean section (OR 2.4; 95% CI 1.1-5.4). GWG in the second trimester of pregnancy more than 7.2 kg increased the risk of abdominal delivery more than 2 times (OR 2.4; 95%CI 1.0-6.3). Cephalopelvic disproportion was the main indication for cesarean section in the group of EGW. It met in 3 times more often than in the control (OR 3.0, 95%CI 1.0-10.0); the leading mechanism was macrosomia of the fetus. Preeclampsia in the cesarean section was only in the main group.

Conclusions

Excessive GWG is a risk factor for prolonged pregnancy, induction of labor and uterine inertia and increases the rates of urgent cesarean section, mainly due to cephalopelvic disproportion and preeclampsia.

[879] Influence of social and biological factors on menstrual cycle in younger medical students (residents and non-residents)

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Introduction

Menstrual cycle disorders comprise many pathological conditions of the female reproductive system and can be caused by various factors. Their early identification and management is of significance both in terms of effective medical care and solution of national and international demographic problems.

Aim of the study

The aim of the study was to investigate rates of menstrual irregularities in younger medical students (residents and nonresidents) as well as their possible etiological factors.

Materials and methods

The study involved 213 students of 2-4 years aged 19-22 years (86 Russian and 117 Indian students). We designed a author's questionnaire with 20 questions concerning the nature of menstruation, students' diet, physical activity and heredity. Statistical processing was made with Statgraphics 18 package and criterions Chi-squared test (Ď‡2), Mann-Whitney U test.

Results

Thus, 104 students (49%) admitted that after entering the university, the nature of their menstrual cycle changed (Group 1), 109 individuals (51%) had no changes (Group 2). Cycle normalization in Group 1 individuals in the first two years of study was in 57.7% (60 students) - by itself, in 9.6% (10 students) - only after the appropriate treatment. Menstrual disorders at the time of the study persisted in 34 individuals (32.6%). Nevertheless, 70 students (67, 3%) of the group 1 didn't consult a gynecologist. There were significant differences: in Group 1 severe 20.2% and slight 10.6% menstruations were more common compared with Group 2, 8.2% and 4.6%, respectively (p=0.007 Ď‡2=10.106); hadn't menstrual irregularities before entering the university 52.88% of Group 1 and 75.23% in Group 2 (p=0.002, Ď‡2=13.609); 69.2% of students in Group 1 had their meals primarily in the evening and in 49.5% in Group 2 (p=0.018; Ď‡2=10.074). There were no significant differences in the parameters: „BMI on the 1st year and during the study", „menarche age", „painfulness of menstruation", „change of nutrition", „level of physical activity", „thyroid disease", „diabetes mellitus in relatives".

Conclusions

Adaptation university process can be accompanied by certain changes in menstrual function in almost half of the students. After the 3rd year the disorders persist in 15.4% of individuals. Students with menstrual irregularities compared with the healthy ones have higher rates of irregular periods in the high-school, rarely visit a gynecologist and have irrational daily diet.

[1014] Sexual dysfunction in postmenopausal women

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Introduction

Menopause is a physiological process that every woman is going to experience during her lifetime, however in some women, it has potential to lead to various pathological complications. These complications and menopause itself can lead to sexual dysfunction. An active sex life is important to postmenopausal women, therefore failure to achieve this can have a negative effect on their life quality.

Aim of the study

The aim of the research is to find out the prevalence of sexual dysfunction in postmenopausal women, impact on quality of life and the role of urogenital disorders in sexual dysfunction development.

Materials and methods

78 postmenopausal women aged 54 - 84 were surveyed in three different GP practices in Latvia. The questionnaire was carried out between January 2021 and February 2021. An anonymous questionnaire was used. Microsoft Excel 2010 and IBM SPSS 26 Statistics were used for data collection and statistical processing. Chi Square and Fisher's Exact tests were used for data analysis.

Results

78 postmenopausal women aged 54 - 84 participated in the study, with an average age of 65,17 (SD 7,47) years. The average menopause age was 50,13 (SD 2,55), the median age was 50,00 (Q1; Q3 48,00;52,00). The majority of women discussed menopause onset with a healthcare professional (62/78; 79.5%). Sexually active were 67.9% (53/78) of postmenopausal women, but 87.2% (68/78) were in a relationship. The prevalence of sexual dysfunction such as decreased sexual desire was found in 74.4% (58/78) of women, reduced well-being during sexual relationships to 51.3% (40/78) of women, difficulty, or inability to reach orgasm to 43.6% (34/78) of women. The prevalence of urogenital pathologies such as vaginal dryness affected 52.6% (41/78) of postmenopausal women and had statistical significance between women with decreased sexual desire. To 25.6% (20/78) of all respondents sexual activity played a very important or important role in everyday life, to 73.1% (57/78) of women intimacy and tenderness played a very important or important role in everyday life.

Conclusions

More than a half of women in postmenopause had active sexual life, therefore decreased sexual quality plays an important role in women's well-being. A significant proportion of postmenopausal women experienced sexual health problems, such as decreased sexual desire, reduced well-being during sexual relationships and difficulty or inability to reach orgasm.

[1019] Assessment of the level of women's knowledge about HPV infection and influence on cervical cancer

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Introduction

Cervical cancer is one of the most common cancers in women. A link between infection with oncogenic HPV types and the occurrence of cervical cancer has been proven. Proper prophylaxis in the form of regular cytology and HPV genotyping and widespread vaccination reduce the incidence of this type of cancer in women.

Aim of the study

The purpose of this study is to determine the level of women's knowledge about HPV, its association with cervical cancer, and the preventive measures women take to prevent this cancer.

Materials and methods

The study group consisted 770 female respondents, mean age 28.8 ŚĪ 10.45 years were included. A self-administered questionnaire of 49 questions was used that included questions about sociodemographic data and knowledge of risk factors for HPV infection, its symptoms and consequences, and methods of prevention and detection. Inclusion criteria: female sex, age18-70 years, accommodation, education, knowledge about HPV.

Results

The results of the questionnaire show that despite many educational programs and events aimed at raising awareness about cervical cancer prevention, up to 13% of women surveyed have never heard of the human papillomavirus and 34.2% do not know what diseases are caused by HPV infection.There was observed significant correlation between accommodation and regular attendance on gynecologist appointments which was higher among citizens of city over one hundred people (p=0,035.)

69.72% of women are not aware of the possibility of using a highly sensitive test - HPV genotyping - for cervical cancer prevention. Additionally, 93.48% of the female interviewers have never had or do not know of this test being performed on them. Over 85% of women who are aware of HPV are not vaccinated, 45% of whom cite lack of awareness as the main reason. Among those who have heard about HPV, 67.7% get their knowledge about HPV infection and its consequences from mass media (Internet, TV). As many as 75.38% of the surveyed women assessed their knowledge of cervical cancer risk factors and prevention as insufficient or did not know anything about these issues.

Conclusions

The survey conducted shows that women's knowledge of the human papillomavirus and it’s association with the occurrence of cervical cancer is unsatisfactory. Prophylactic measures taken by women are inadequate and knowledge about them is also limited.

[1027] Prenatal screening in Poland - is it necessary to raise awareness and knowledge among women?

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Introduction

Prenatal screening is a group of exams focused on detecting abnormalities of the fetus such as malformations or genetic diseases at the earliest possible stage of pregnancy. Early detection allows in some cases to start an appropriate treatment of the fetus already during pregnancy, prepare properly for the delivery and plan postnatal therapy.

Aim of the study

The aim of the study was to analyse awareness and knowledge of prenatal screening among Polish women.

Materials and methods

The research data was anonymously collected using an author survey posted on various Internet groups. The study group included 2107 women living in Poland, aged 18-58 (median 32). The respondents' knowledge was estimated via a series of questions about schedule, invasiveness and risks of prenatal screening procedures.

Results

As many as 75% of the respondents declared higher education. Among the study group, more than 85% were not professionally related to medical jobs. There is a very weak positive correlation between the level of education and level of knowledge of prenatal screening ($r=0.15$, $p<0.05$, Spearman's rank correlation test). Around 20% of the respondents stated that they have not been adequately informed by an obstetrician about the process and safety of prenatal testing. Furthermore, 16.5% of the women declared to not have been properly informed about the possibility of performing prenatal screening. It is important to point out that the Internet was the most common source of knowledge about prenatal testing (82.2% of the respondents), followed by an obstetrician providing prenatal care (73%) and research papers or popular science articles (43%). Only 36.1% of the respondents assessed the prospect for the development of the prenatal screening in Poland as „good' or „very good'.

Conclusions

The level of women's satisfaction with communication with the doctor about prenatal screening could be higher. Not well informed patients seek for more knowledge on the Internet where misleading information can be easily found. The Internet is an important source of information which determines the knowledge of prenatal testing. Still, doctors have a major impact on how prenatal screening is understood by the women. Thus, creating high quality online materials for women alongside with putting emphasis on education in the doctor's office are both vital to raise awareness and make prenatal screening more common in Poland.

[1068] What do Polish mothers know about vaginal birth after caesarean section?

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Introduction

Approximately 44% of Polish women deliver by caesarean section (CS), and this rate is far from the WHO recommendation of 10-15%. Successful vaginal birth after caesarean (VBAC) is associated with a lower number of perinatal complications than second CS.

Aim of the study

The study aimed to investigate the Polish mothers' knowledge about VBAC and their source of information about it.

Materials and methods

We performed a cross-sectional study among women who delivered their first baby by CS after 2009. From January 17th 2020 till February 24th 2020, we collected responses via an online questionnaire. The questionnaire was divided into 4 sections for 4 groups of women: A: women with only one delivery by CS; B: women after 2CS; C: women after CS and VBAC; D: woman after CS and trial of labour after caesarean section (TOLAC). Statistical analysis was performed with the use of Microsoft Excel with a p-value <0.05 considered significant. A chi-squared test was used for categorical variables.

Results

1058 women participated in the study. 89% of respondents had heard about VBAC. 70% searched for information about it on the internet and 20.7% asked their doctor. Younger mothers (‰¤30 years of age) had heard of VBAC more often than women above the age of 30 (p=0.003). Additionally, women from group A knew about VBAC with a higher frequency than those after two or more labours (p=0.004). However, only 32% of women from group A indicated the correct time that has to pass between childbirths. 13% of all respondents could not name any benefit of VBAC, and the worst level of knowledge was presented by mothers from group B, as 19% did not know any advantages (p<0.001). 77% of respondents were interested in VBAC during their second pregnancy and asked their doctors about such an option. Those who inquired their obstetricians about VBAC were more likely to be a part of group C or D (p<0.001). 75% of doctors informed their patients about the possibility of VBAC, but only 48% presented the benefits of it. Women from group B were less satisfied with their childbirth than women after TOLAC and VBAC (68%, 93% and 96% respectively, p<0.001).

Conclusions

Most Polish mothers know about the possibility of VBAC, however, the quality of their knowledge is not satisfactory. Obstetricians should inform their patients about VBAC and present its benefits more carefully.

[1072] Factors influencing the length of breastfeeding among women in Poland

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Introduction

According to a 2015 study by Dr. Anna SzczygieŁ, only 4% of women in Poland meet the standard recommended by the WHO, that is, they exclusively breastfeed until the child is 6 months old.

Aim of the study

The aim of this study was to determine what percentage of women met the standard recommended by the WHO and whether women are breastfeeding for a shorter period of time than they previously assumed and to analyze the potential factors influencing their decision on breastfeeding duration. Our study highlights the relationship of breastfeeding duration with lifestyle, health, psychological aspects and breastfeeding knowledge among the women interviewed.

Materials and methods

In our study, we used an online survey, which was divided into seven categories according to the previously stated purpose (Characteristics of the respondent; Characteristics of breastfeeding; Lifestyle and appearance, and breastfeeding; Breastfeeding knowledge and decision; Women's health, and breastfeeding; Influence of relatives; Breastfeeding, and COVID-19).

The survey included: 10 open-ended questions, 36 closed-ended single-choice questions, and 5 closed-ended multiple-choice questions. The survey included 914 respondents who are mothers of at least one child. The women were between 19 and 50 years old and lived in Poland.

Results

Among the women who participated in the study, 24.6% of the respondents breastfed for a shorter period than they anticipated. 65,5% of the respondents was meeting the standards recommended by World Health Organization, that is they exclusively breastfed until the child is 6 months old. 40.8% of women who are mothers of more than one child admitted that breastfeeding their first child convinced them of their decision to breastfeed another. Among the factors we examined, concern about changing breast shape and size was not important to 96.3% of women. The desire to return to smoking cigarettes was the reason for ending breastfeeding for 1.4% of the women, while alcohol consumption for 6.3%.

Conclusions

Based on our survey, it can be concluded that despite many factors that could influence premature termination of breastfeeding, more than half of the women breastfed as planned or longer. An important aspect to note is that the doctor in charge of the pregnancy mentioned or encouraged breastfeeding to only 25.7% of the respondents and only 10.3% of the respondents were advised by their doctor about problems that may occur with lactation and where to seek advice.

Oncology & Hematology

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[768] Blood count-derived inflammatory markers - a novel tool for prediction of BCG failure in high-risk non-muscle invasive bladder cancer

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Introduction

Intravesical Bacillus Calmette-GuÃ©rin (BCG) constitutes a gold standard of treatment in high-risk non-muscle-invasive bladder cancer (NMIBC). Unfortunately, up to 40% of patients may experience treatment failure. While EORTC and CUETO scoring systems have become part of routine clinical practice when predicting NMIBC recurrence and progression, well-defined risk factors of BCG failure remain to be defined.

Aim of the study

We aimed at evaluating the utility of blood count-derived inflammatory markers for BCG failure prediction in patients with high-risk NMIBC.

Materials and methods

We retrospectively analysed the records of 183 consecutive patients, primarily diagnosed with high-risk NMIBC, who underwent transurethral resection of the bladder tumour (TURBT) and were subsequently treated with BCG instillations. Thirty-nine patients met the BCG failure criteria defined in current EAU 2020 guidelines. Time to BCG failure was estimated with the Kaplan-Meier method, while differences in BCG failure-free survival were assessed using the log-rank test. Uni- and multivariate analysis was performed using logistic regression.

Results

In Kaplan-Meier analysis, patients with high preoperative NLR (> 2.3), PLR (> 147) and low LMR (< 2.55) had shorter time to BCG failure ($p < 0.05$). Systemic inflammatory marker (SIM) score based on categorized values of NLR, PLR and LMR was also predictive for time to BCG failure ($p < 0.05$). On multivariable analysis, all markers, except LMR, were significant adjuncts to CUETO recurrence score when predicting BCG failure.

Conclusions

Our study demonstrates an association between blood count-derived inflammatory markers and BCG failure in patients with high-risk NMIBC. Current data is yet insufficient to state definitive recommendations for implementation of these markers in clinical practice. Thus further prospective large-cohort studies are crucial to establish the optimal cut-offs and confirm their clinical utility.

[813] Tissue microarray scan analysis: searching for links between entosis and clinical cancer pathology

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Introduction

Advances in cell biology lead to the discovery of novel intercellular processes like entosis. Entosis is an invasion of a live cancer cell into its neighbour resulting in formation of a cell-in-cell structure. Entoses can be found in tissue samples, but proving their clinical significance is challenging. Although the process was first reported 14 years ago, its role in cancer biology remains unclear. Recent clinical data indicate entosis as a novel diagnostic and prognostic marker.

Aim of the study

We aimed to verify a searching method for links between entosis and clinical features of different types of cancers. The method relies on analysing digital scans of tissue microarrays - slides containing tissue samples from multiple patients. We compared the number of entoses in different tissue samples and tested for correlation with clinical characteristics.

Materials and methods

We obtained high-resolution scans of invasive ductal breast carcinoma (BC081116c) and head-and-neck squamous cell carcinoma (HN801c, HN802c) tissue microarrays, stained with HE (Biomax.us). We developed an online tool for storing and analysing the tissue sections.
For each tissue microarray, we inspected the tissue sections and marked entoses on them. This was performed by 2-4 independent researchers. To remove misidentified entoses, we verified each marked structure by checking if it met histopathological criteria for entosis. We also calculated cancer tissue surface area in sq mm. We computed the number of entoses per sq mm and tested for its correlation with available clinical features (age, stage, grade, TNM; also ER, PR, HER2 and Ki67 expression in breast cancer).

Results

We identified 2626 entoses on 188 tissue sections. 1020 were verified to meet the criteria of entosis. Breast cancer had a significantly higher prevalence of entoses then head-and-neck cancer. We found a statistically significant correlation between entoses number and HER2 expression in breast cancer. We found no correlations with age, stage, grade, TNM or expression of ER, PR and Ki67.

Conclusions

Using tissue microarray analysis, we detected for the first time a statistically significant correlation between the number of entoses and HER2 expression in breast cancer. Our data are consistent with results of other studies.
Tissue microarray scan analysis proved to be an effective method of testing for correlations between histopathology and clinics. Its advantages: low cost, reproducibility and effectiveness make this method a useful tool in histopathology.

[836] Clinical value of detecting Tumor Endothelial Marker 8 (ANTXR1) as a biomarker in the diagnosis and prognosis of colorectal cancer.

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Introduction
Despite the continuous improvements in prevention and detection of colorectal cancer (CRC) there is an urgent need to find a sensitive, specific, and noninvasive biomarker to improve the early diagnosis and prognosis of CRC.

Aim of the study
We aimed to evaluate the tissue TEM8 expression and the serum TEM8 concentration in CRC patients.

Materials and methods
The study enrolled 42 CRC patients and 35 controls. Immunohistochemical staining was performed to assess the TEM8 tissue expression, whereas the serum TEM8 concentration was evaluated with the ELISA assay.

Results
The expression of TEM8 observed in all primary colorectal tumor samples was significantly correlated with the TNM stages and the presence of lymphovascular invasion. The serum TEM8 concentration was significantly higher in CRC patients than in the controls. The TEM8 level was strongly associated with the TNM stage, depth of invasion, and lymph node and distant metastasis. Patients with a high serum TEM8 concentration had a worse overall survival (OS) rate than CRC patients with a low serum TEM8 level.

Conclusions
TEM8 may serve as a biomarker for the diagnosis of CRC and it has value in predicting the prognosis of patients with CRC.

[837] Serum ROBO4 and CLEC14A: preliminary evaluation as diagnostic and progression biomarkers in colorectal cancer patients

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Introduction
Colorectal cancer (CRC) is an important global burden, and the discovery of biomarkers for screening and monitoring is a current challenge.

Aim of the study
The present study aimed to determine the serum concentration of ROBO4 and CLEC14A in CRC patients and assess the clinical value of these diagnostic and progression biomarkers in CRC.

Materials and methods
The ROBO4 and CLEC14A levels were measured using ELISA tests. Blood sera were tested in 32 CRC patients and 16 controls at two time points (before and after surgery).

Results
The serum concentrations of ROBO4 and CLEC14A were significantly higher in CRC patients than non-cancer controls; the concentrations were already higher in TNM stage I+II CRC patients. The sensitivitiy and specificity of ROBO4 and CLEC14A in distiguishing cancer patients form controls ranged from 71.9% to 100% and from 84.5% to 100%, respectively. The serum ROBO4 concentration was associated with the TNM stage, depth of invasion, and lymph node and distant metastases. No significant relationship was observed between the CLEC14A concentration and the tumor site or the N and M stages. The level of ROBO4 was statistically lower 3 months after the surgery, compared to the level noted prior to the operation. The concentration of CLEC14A decreased in the postoperative period, compared to preoperative one; however, the decline was not statistically significant.

Conclusions
Our preliminary study has provided evidence that ROOB4 and CLEC14A seem to be suitable biomarkers for clinical diagnostic purposes. However, ROOB4 appears to be more appropriate for assessment of CRC progression.

[901] Investigating the influence of tyrosine kinase inhibitors on rituximab-mediated immunophagocytosis in B-cell acute lymphoblastic leukemia

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Introduction

Tyrosine Kinase Inhibitors (TKIs) are targeted drugs used in Chronic Myelogenous Leukemia (CML) and B-cell acute lymphoblastic leukemia (BCP-ALL) patients harboring BCR-ABL translocation, also known as Philadelphia (Ph) chromosome. TKIs have well-established, anticancer activity associated with ABL kinase inhibition, but various off-target effects are reported as well. Accumulating data indicates that TKIs, especially dasatinib, can induce suppressive effects on effector immune cells. Recently, an anti-CD20 monoclonal antibody rituximab was added to the clinical treatment protocol of adult BCP-ALL patients with ≥20% CD20+ leukemic cells. It is used along with classical chemotherapeutic agents and in Ph+ patients also along with TKIs. The action of rituximab depends on the function of immune cells. Antibody Dependent Cellular Phagocytosis (ADCP) is one of the mechanisms through which rituximab exerts its therapeutic function. Therefore, elucidation of the effects of TKIs on rituximab-mediated ADCP of BCP-ALL cells may contribute to the efficacy of the combination chemo-immunotherapy.

Aim of the study

To determine the impact of TKIs on rituximab-mediated ADCP of CD20+ BCP-ALL primary cells.

Materials and methods

Monocyte derived macrophages (MDMs) were obtained from monocytes isolated from blood of healthy donors and differentiated into M1 subtype.

Phagocytosis assays were conducted in order to assess the effectiveness of rituximab-mediated ADCP after preincubation with different TKIs - imatinib, dasatinib, ponatinib, nilotinib and bosutinib. CD20+ primary BCP-ALL cells opsonized with rituximab were used as target cells.

Target and effector cells were pre-treated with TKIs for 2 hours, co-incubated for 1 hour at 37 Ś°C and analyzed by flow cytometry.

Results

We observed differential effects of TKIs on ADCP. Dasatinib triggers a significant (on average 53%) drop in phagocytic activity of macrophages. Imatinib and bosutinib also reduce phagocytic activity, while after treatment with ponatinib and nilotinib it remains relatively unchanged. The research is in progress.

Conclusions

The use of dasatinib may suppress the function of macrophages. Effects of TKIs on immune cells need further studies.

[907] Zinc in serum of multiply myeloma patients

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Introduction

Multiply myeloma (MM) is a neoplasm in which uncontrolled proliferation of plasma cells in bone marrow appears. These cells produce monoclonal protein, which can be detected by electrophoresis in serum and urine. Patients with MM present several symptoms: anemia, bone lesions, hypercalcemia and renal insufficiency. Zn is a trace element which plays an important role as cofactor for various enzymes which are involved in DNA integrity and repair, protein synthesis and cell proliferation. Zinc has been already proved to be an important factor in different cancers progression.

Aim of the study

The aim of this study was to evaluate Zn concentration in patients with MM.

Materials and methods

The study was conducted in 48 MM patients and 39 healthy controls. Zinc was measured in serum using the Zinc Assay Kit MAK032 by Sigma Aldrich according to the manufacturer instructions.

Results

Zinc serum concentration in MM patients was 48.09 ±23.63 Ķg/dl, whereas in healthy control zinc concentration was 70.22 ±33.34 Ķg/dl. The difference was statistically significant, p=0.0002.

Conclusions

Patients with multiply myeloma have lower zinc concentration, comparing with healthy control. It may be associated with lower activity of enzymes taking part in DNA repairment in malignant cells.

[1005] Investigating the expression of Carbonic anhydrase IX in Follicular Lymphoma

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Introduction

Follicular lymphoma (FL) is an indolent B-cell lymphoma, which usually develops in old age. Grading of FL is based on the number of the neoplastic cells (grade 1,2,3a,3b). Hypoxia inducible transcription factor-1-ŽĪ (HIF1ŽĪ) is a master regulator in the cell and under hypoxic conditions it activates several survival pathways. Germinal centers in the lymph nodes showed to be hypoxic and even the expression of HIF1ŽĪ was detected in previous studies. One of the HIF1ŽĪ-associated factors is the Carbonic anhydrase IX (CAIX), that was reported in several malignancies (e.g. classical Hodgkin lymphoma) but not in FL.

Aim of the study

In our study, we aimed to investigate the expression of CAIX in different grades of FL.

Materials and methods

In our retrospective study, we selected 20 FL FFPE samples (n=5/grade) and a control group of reactive lymph node FFPE samples (n=5). After the routine pathological stainings, CAIX specific antibody was used to perform immunohistochemical analyses. The slides were first examined with light microscope (Leica DM2000) then digitalized with Panoramic Slide Scanner MIDI (3D HISTECH, Budapest, HU). As a next step, photos were taken about the germinal centers (n=15/case), which were analyzed with ImmunHistoChemistry plugin of ImageJ. The software generated a number for the positive and negative pixels.

Results

The expression of CAIX was found to be intensive in the control and in the low-grade FL group (grade 1, grade 2) in comparison with the high-grade group (grade 3, grade 4) by light microscope. The results were supported by the image analysis in which it was found that the highest levels of expression were in the control group. Interestingly, the expression of CAIX decreased steadily in the different grades and was absent in grade 3b.

Conclusions

Taken together, the expression of the endogenous hypoxia factor CAIX was high in the low-grade FL group compared to the high-grade cases. Thus, the connection between hypoxia and the malignant transformation in FL needs further investigation.

[1026] Clinical and molecular analysis of the process of entosis

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Introduction

It is considered that one of the processes, by which cancer cells survive the host's immune response and administered chemotherapeutics, is the ability to form entotic („cell-in-cell") structures. The molecular mechanisms engaged in promoting entosis are still unclear. Here, we present a study on the frequency of entotic structures in primary and metastatic breast cancer tissue. Moreover, we investigate the role of two proteins, SRC kinase and podoplanin (PDPN), in the development of cell-in-cell structures in vitro.

Aim of the study

The aim of the study was to assess the incidence of entosis in primary and metastatic breast cancer tissue. Also, we elucidated the role of the SRC tyrosine kinase and PDPN (a membrane glycoprotein) in regulation of biological pathways connected to the development of entotic structures.

Materials and methods

Histopathological analysis of the number of entotic cells in breast cancer tissue was conducted using archival paraffin postoperative tissue material. The molecular studies were performed on breast (MCF-7) and pancreatic (BxPC-3) cancer-derived cells. The role of the SRC and PDPN genes was evaluated via knockdown of their expression using specific siRNA. The mRNA expression and protein yield were investigated using RT-qPCR and Western blot techniques. The frequency of cell-in-cell structures was assessed using haematoxylin/eosin and DAPI/falloidin-FITC staining.

Results

The histopathological study revealed that the total number of entoses in the metastatic tumor is significantly higher in comparison to the primary tumor tissue. The molecular study showed that knockdown of PDPN results in a >2-fold increase in the number of cell-in-cell structures in both the MCF7 and BxPC3 cell line. In contrast, depletion of SRC expression significantly decreased (by 30%) the number of entotic cells in the BxPC3 cell line. Further analysis revealed that knockdown of PDPN is associated with activation of ERM (ezrin-radixin-moesin) proteins in the tested cells.

Conclusions

The obtained data indicate that the number of entosis in the secondary tumor is significantly higher than in the primary tumor, which suggests that this process may be an important factor promoting metastasis. The molecular data imply that PDPN may play an important, protective, role in the process of entosis, while SRC may promote entotic formation. We propose that the ERM-PDPN axis might act as a molecular trigger controlling the development of cell-in-cell structures.

[1039] Early Metabolic Syndrome and Cardiovascular Risks: comparison of Young Adult Survivors with Childhood Acute Lymphoblastic Leukemia and Controls.

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Introduction

Young adult survivors of childhood acute lymphoblastic leukemia (ALL) are at higher risk of early cardiovascular events and changes in metabolism. Lipid profile, glucose level, lifestyle factors have an important impact on continuing morbidity and early mortality in young survivors.

Aim of the study

The study aimed to evaluate and determine early signs of metabolic syndrome and cardiovascular risks in young adult survivors of ALL. Survivors treated in Children`s Clinical University Hospital during childhood or adolescent period until 18 years of age.

Materials and methods

A prospective observational study was performed between the 2017- 2020 year. Physical health, blood parameters (lipid profile, glucose, high-sensitivity CRP, insulin, HOMA index) of 41 survivors with childhood ALL were compared with age- and sex-matched 40 healthy volunteers of the control group. Survivors were 18-36 years old and disease-free for at least 5 years (Mdn age of diagnosis ALL - 5,5; Mdn follow-up age - 17, Mdn age at the moment of research - 22). The study was approved by the Ethics Committee of Riga StradiĹ†Ĺˇ University and analyzed by Microsoft Excel and SPSS 23.

Results

Clinical characteristics showed adverse lipid profiles (Total Cholesterol, High-Density Lipoprotein Cholesterol, Non-High-Density Lipoprotein Cholesterol, Low-Density Lipoprotein Cholesterol, R-Cholesterol, Triglycerides), higher prevalence of insulin resistance, and hypertension in survivors of childhood ALL. 17% (n=7) of survivors have metabolic syndrome (3 out of 5 criteria). Statistically, a significant difference was observed comparing: High-Density Lipoprotein Cholesterol, Non-High-Density Lipoprotein Cholesterol, R-Cholesterol, BMI. The correlation was found between High-sensitivity CRP and weight, waistline, BMI, Diastolic pressure, High-Density Lipoprotein.

Conclusions

Long-term outcomes result in higher risks of developing cardiovascular diseases in young childhood survivors. Survivor group has significant modifications in High-Density Lipoprotein Cholesterol, Non-High-Density Lipoprotein Cholesterol, R-Cholesterol, BMI. This group of patients needs closer follow-up with the screening of metabolic syndrome components, unfavorable lifestyle factors to prevent cardiovascular incidence.

[1096] Pre-clinical evaluation of systemic toxicity of novel PD-L1-targeting chimeric antigen receptors

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Introduction

Various malignancies overexpress programmed death-ligand 1 (PD-L1) to evade the immune response. Redirecting cytotoxic potential of chimeric antigen receptor (CAR) modified T cells against PD-L1 (PDL1-CAR-T) combines the benefit of acting against a range of tumors with the potential of „heating" the tumor site by unleashing immune response. However, the systemic toxicity of PDL1-CAR-T cell raises concerns, as PD-L1 is express at a detectible level in multiple healthy tissues.

Aim of the study

Evaluation of systemic toxicity of PD-L1-targeting CAR-T cells therapy in pre-clinical models.

Materials and methods

PD-L1-specific CAR construct was created by changing single-chain variable fragment (scFv) derived from anti-CD19 FMC63 antibody to scFv derived from atezolizumab (ATZ) - anti-PD-L1 monoclonal antibody, which is cross-reactive with mouse PD-L1. Peripheral blood mononuclear cells stimulated with PHA-L served as a source of T cell for lentiviral transduction with CAR constructs. CAR-modified T cells were expanded in a complete culture medium supplemented with IL-2 and Dynabeads Human T-Activator CD3/CD28. CAR expression and cytotoxicity were evaluated in vitro. To evaluate in vivo efficacy and toxicity mice were injected intravenously with Raji or Raji-PD-L1 cells followed by anti-CD19 or anti-PD-L1 CAR-T injection.

Results

The specificity of PDL1-CAR was confirmed by reversing with ATZ the cytotoxicity of PDL1-CAR-T cells but not CD19-CAR-T against Raji-PD-L1 cells. Animal studies showed extended median survival from 17 to 47 days of mice treated with CD19-CAR-T. However, severe toxicity was observed in mice injected with PDL1-CAR-T. While mice treated with CD19-CAR-T received 4 cycles of injections, PDL1-CAR-T could be injected only once due to deterioration of mice conditions within 12 hours after injection. Similar systemic toxicity of PDL1-CAR-T therapy was observed in mice without tumors.

Conclusions

The lack of tumor-specific antigens is a great obstacle for CAR-T therapy in solid tumors that force to use tumor-associated antigens (TAA) as an alternative target. However, targeting TAA should raise safety concerns, as TAA is overexpressed on malignant cells but is also expressed on healthy cells. While ATZ is a clinically approved cancer therapy, the anticancer efficacy of CAR-T based on ATZ is limited due to severe systemic toxicity. Further study on toxicity mechanisms and adjusted T cells subpopulation are needed to bring the PDL1-CAR-T therapy closer to the clinic.

Pediatrics & Neonatology

Date:

Saturday, 29th May 2021, 11:00 AM

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[811] The impact of digital screen time on eating habits and physical activity in children and adolescents

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Introduction
Excessive digital screen time may be associated with unhealthy eating habits and insufficient physical activity. Thus, it may be one of the risk factors of obesity. Nowadays, while COVID-19 pandemic forced children to remote learning and limited opportunities to play sports, it appears particularly important to manage children's screen time and implement healthy lifestyle habits.

Aim of the study
The aim of the study was to examine the association of digital screen time with eating habits and physical activity in children.

Materials and methods
A nationwide survey was conducted among parents of preschool and school children. Computer Assisted Web Interview was used via a Google survey questionnaire. From 11/03/2021 to 20/03/2021 we obtained 4437 responses, out of which 3127 met the inclusion criteria for the final analysis. The study was approved by the Bioethical Committee of the Medical University of Lublin (KE-0254/15/2021).

Results
Survey responses referred to 1662 (53%) boys and 1465 (47%) girls. The mean age of the children was 12.1 ŚĪ 3.4 years. During week most children (71%) spent more than 4 hours daily on learning using electronic devices and 43% of children spent 1-2 hours daily using devices for entertainment. The median of meals daily was 4.5. Majority of children (89%) was exposed to screen during meals. In 77% of cases eating snacks between main meals was reported, most commonly fruits. There was a relationship between screen time and the frequency of exposure to screen during meals ($Chi2=62.09$; $p<0.001$). Most of children (87%) used to drink beverages while using electronic devices, mainly water, juices and tea. The mean time of daily physical activity was 2.08ŚĪ1.8hoyrs, median: 1.5hours. There was a relationship between daily screen time and time on physical activity ($Chi2=37.94$; $p<0.001$).

Conclusions
Most common improper dietary habits included screen use during meals and eating snacks between meals. The digital screen time may negatively affect participation in physical activity. There is a need to develop effective strategies to limit excessive screen time, and to promote healthy eating habits and physical activity in children.

[888] Effects of Leptin on Breastfeeding Behaviour

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Introduction

Breast milk is a biological norm of nutrition and protection for young children. Breastfed infants have a lower risk of eating disorders. Protective effect is associated with the level "hormone - regulator level of appetite and energy balance" - leptin. Assesment of leptin influence on eating behavior in breastfeeding is of significance.

Aim of the study

The aim of the study was evaluate eating behavior of breast-fed infants with different levels of leptin in the mother's milk.

Materials and methods

The study involved clinical, laboratory, serological (determination of leptin level) and functional (ultrasound examination of the abdominal organs) investigations of 103 mother-infant pairs. Children were breastfed on demand. Leptin level in breast milk was determined in 309 samples three times (at 14th day, 1st month and 3rd month) by enzyme-linked immunosorbent assay using the Human Leptin DuoSet kit (R&D Systems, USA), which was optimized for measuring leptin in breast milk. Child's breastfeeding behavior was assessed with the BEBQ questionnaire (The Baby Eating Behavior Questionnaire in the Gemini birth cohort, Clare H. Llewellyn, et al., London, 2011). Daily biorhythms (the duration and severity of night and day crying and fuss behavior) were studied based on parent's diary data.

Results

Leptin level and child's eating behavior correlation was assessed by the volume of milk sucked, duration of feeding, and intervals between feedings. Average leptin concentration was 0.43 ŚĪ 0.10 ng / ml (range: 0.26-0.57 ng / ml) with a significant correlation between the level of leptin and the volume of milk sucked. More frequent attempts to breastfeed of children to the mother's breast were associated with a decrease in the leptin level, while longer periods between feedings had children whose mothers had a higher leptin level. In the group of children who received milk from mothers with an increased leptin content, better mood was more often noted, less prolonged periods of crying, fuss behavior and more rare night episodes of feeding. The children slept well at night and did not wake up for feeding. Leptin concentrations were significantly higher on the 14th day after and directly proportionally decreasing towards 3rd month.

Conclusions

Infants with only breastfeeding on demand exhibited a wide range of self-regulating eating patterns with long-term benefits in preventing eating disorders. Leptin influences on appetite control and eating behavior in infants.

[938] Abnormalities and syndromes associated with congenital scoliosis: A retrospective study of 223 pediatric patients

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Introduction

Congenital scoliosis is caused by early embryologic errors during spine formation. The development of the nervous, cardiovascular, and genitourinary systems share the same origin of the mesoderm and ectoderm, therefore it is common to see anomalies and syndromes associated with congenital scoliosis.

Aim of the study

The objectives of this study were to carry out a descriptive analysis of the anomalies and syndromes associated with CS and to study risk factors for curve progression that may play a fundamental role in decision-making.

Materials and methods

Retrospective cohort study of 223 patients between 2013-2018 (5 years of follow-up). This is a single-center study (San Juan de Dios Hospital). Demographic, clinical and radiological data were obtained from the medical records. Radiological information was evaluated by radiographs, CT, 3DCT and MRI.

Results

A total of 223 patients were included, (147 females, 66%) whose mean age was 7ŚĪ5 years. Intraspinal anomalies were documented in 15% of patients; syringomyelia occurred more frequently. Thoracic anomalies were documented in 37% of patients; rib fusion occurred most frequently. Cardiac anomalies were documented in 10% of patients; ventricular septal defect occurred most frequently. Renal anomalies were observed in 13% of patients; renal agenesis occurred most frequently. A total of 41 patients presented syndromes; the most frequent were Goldenhar syndrome and VACTERL syndrome (10 and 8 patients respectively). Late diagnosis, the association of intraspinal anomaly with thoracic anomaly and the presence of syndromes were associated with a greater curve progression.

Conclusions

The incidence of intraspinal, cardiac, thoracic and renal anomalies makes early diagnosis a critical part of all patients with congenital scoliosis. Surgeons should evaluate these anomalies because they may increase the risk of intraoperative and postoperative complications.

[954] The changes in insulin like growth factor axis in children undergoing the hematopoietic stem cells transplantation

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Introduction

The insulin-like growth factors (IGFs) family is involved in mediating growth and development, and thus in regulating the metabolic processes, as well as it induces growth and proliferation not only as a physiological process, but also in tumor cells. The hematopoietic stem cells transplantation (HSCT) is performed to treat multiple disorders, i.a. hematopoietic malignancies, but at the same time it strongly affects the whole body and its metabolism. However, little is known about the dependencies between the HSCT procedure and the IGF family proteins.

Aim of the study

The analysis of the expression of chosen IGF-axis genes, concentration of their protein products and their correlations with essential parameters associated with the body metabolism in children undergoing the HSCT procedure.

Materials and methods

The cross-sectional study was conducted on 19 children before and after HSCT. Genes' expression was determined after isolation of peripheral blood mononuclear DNA using microarray technique. The peptides' concentrations were analyzed with the immunoassay method. The statistical analysis was performed using Statistica Software.

Results

All result listed here are statistically significant ($p<0.05$): The concentration of IGF1, IGFBP1, IGFBP3 and IGFBP6 were higher in the post-HSCT. IGF1 correlated positively with insulin and leptin receptor. IGF2 correlated positively with leptin after OGTT. IGFBP1 correlated negatively with blood pressure and insulin and positively with leptin receptor. IGFBP2 correlated positively with ghrelin and leptin after OGTT and resistin. IGFBP3 correlated positively with apelin after OGTT and cholecystokinin. IGFBP6 correlated negatively with glucagon-like peptide-1 and leptin receptor.

There were no statistically significant differences in the expression of IGF axis genes.

Conclusions

It was shown that the HSCT procedure is associated with the level of IGF-axis elements. There is no association between HSCT and expression of those genes. Our study was the first to examine the expression of the IGF-axis genes in pediatric patients undergoing the HSCT procedure.

[993] Does cesarean section or preterm delivery influence TGF-Î¸2 concentrations in human colostrum?

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Introduction

Human colostrum (HC) is a rich source of immune mediators that play a role in immune defences of a newly born infant. The mediators include transforming growth factor Î¸ (TGF-Î¸) which exists in three isoforms that regulate cellular homeostasis and inflammation, can induce or suppress immune responses, limit Th1 reactions and stimulate secretory IgA production. Human milk TGF-Î¸ also decreases apoptosis of intestinal cells and suppresses macrophage cytokine expression.

Aim of the study

The aim of the study was to determine the concentration of TGF-Î¸2 in HC obtained from the mothers who delivered vaginally (VD) or by caesarean section (CS), and to compare the concentrations in HC from mothers who delivered at term (TB) or preterm (PB).

Materials and methods

In this study, 56% of preterm pregnancies were delivered via CS. The concentrations of TGF-Î¸2 were measured in HC from 299 women who delivered in the 1st Department of Obstetrics and Gynaecology, Medical University of Warsaw: 192 (VD), 107 (CS), 251 (TB), and 48 (PB). The colostrum samples were collected within 5 days post-partum. TGF-Î¸2 levels in HC were measured by the enzyme-linked immunosorbent assay (ELISA) test with the Quantikine ELISA Kit-Human TGF-Î¸2 (cat.no. SB250). Statistical significance between groups was calculated by the Student t-test using StatSoft Statistica 13 software.

Results

The mean TGF-Î¸2 concentration in patients who delivered at term or preterm were comparable. The levels of TGF-Î¸2 in HC were higher after preterm than term being 4648 vs. 3899 ng/mL ($p = 0.1244$). The delivery via CS was associated with higher HC concentrations of TGF-Î¸2. The levels of TGF-Î¸2 were significantly higher in HC after CS than VD (7429 vs. 5240 ng/mL; $p = 0.0017$).

Conclusions

The data from this study suggest: caesarean section was associated with increased levels of TGF-Î¸2 in HC. The increased levels of TGF-Î¸2 in HC of women who delivered prematurely require further research. Early and exclusive breast-feeding by mothers after caesarean section and premature births with colostrum containing high TGF-Î¸2 levels may prevent the negative impact of pathogens which often colonize the gastrointestinal tract and may reduce the risk of chronic diseases in this group of patients.

[1048] Analysis of treatment methods and outcomes for perianal abscess (PA) and fistula in ano (FIA) in infants

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Introduction

Perianal abscess (PA) is a relatively common condition in children and occurs in 0.5 to 4.3% of the infant population. In the majority of cases, it is associated with fistula in ano (FIA). Surgical treatment of FIA includes fistulectomy, fistulotomy or, rarely, cryptotomy.

Aim of the study

The aim of the study is to perform a retrospective analysis of treatment methods and outcomes for PA and FIA in infants at the Department of Paediatric Surgery and Urology of the Regional Specialised Children's Hospital in Olsztyn, Poland, in 2014-2019.

Materials and methods

From January 2014 to December 2019, 44 infants with diagnosed PA and FIA were treated. The majority of patients were boys: 41 (93%) and only 3 (7%) were girls. For PA, three different treatment methods were used: incision and drainage, fistulotomy or fistulectomy.

Results

Out of 44 treated infants with diagnosed PA and FIA, 29 were treated only by incision and drainage. Among them, 19 were cured. FIA was identified in 9 patients and fistulectomy or fistulotomy was performed. In this group, there was 1 recurrence, which was retreated with fistulectomy and cured. In 6 patients, PA drained spontaneously; in 3 of them there was recurrence and FIA was diagnosed during another hospital stay. There were 7 fistulotomies and 14 fistulectomies performed and their efficacy was 100 vs 93%, respectively.

Conclusions

Fistulotomy is the most effective and safest method of FIA treatment in infants. In every case of perianal abscess diagnosis, a fistula in ano should be looked for.

[1079] Evaluation of treatment efficacy in children with IgA vasculitis nephritis (IgAVN) - a multicenter study in Poland

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Introduction
In children with IgA vasculitis nephritis different therapies are used.

Aim of the study
The aim of this study was to evaluate the efficacy of methods of treatment of IgA vasculitis nephritis in Polish children.

Materials and methods
This retrospective study included 128 children with IgAVN from the Polish Registry of Children with IgAVN with a mean age of 8.68 years. All children were diagnosed with nephropathy based on renal biopsy. In all children at the beginning and at the end of follow-up we analyzed: serum creatinine, GFR (ac. to Schwartz formula), IgA, C3 and C4; urine proteinuria and hematuria. Renal biopsy results were graded ac. to the Oxford classification (MEST-C score). Different treatments were analyzed in all children: renoprotection alone (R), renoprotection in combination with prednisone (P) or renoprotection with prednisone and immunosuppression (IS). In addition, patients treated with azathioprine (A) or cyclophosphamide (C) from group IS were compared with patients in the other groups (O). We considered GFR >90ml/min/1.73m2 and resolution of proteinuria as endpoints.

Results
Patients in group IS had significantly higher proteinuria at the beginning of treatment than patients in groups R and P ($p<0.05$). All mean values of GFR, IgA, C3, C4 were not significantly different at baseline. MEST-C score was significantly higher in children of group IS compared to group R and P. At the end of follow-up after a mean time of 3.65 ŚĪ 2.56 years, GFR was not significantly different between groups R, P, IS and mean values were normal in all groups. There were also no significant differences in the percentage of children with normal GFR and proteinuria = 0 between groups R, P, and IS at the end of follow-up and proteinuria and hematuria values were not significantly different between groups. No significant differences were found in IgA, C3, C4 levels. In groups A, C, and O, in children treated with C, proteinuria was significantly higher, C3 was significantly lower, and mean GFR remained normal and did not differ significantly between groups A, C, O at the beginning of the disease. The MEST-C score was significantly higher in the C group and lowest in the O group (C>A>O, $p<0.001$) At the end of follow-up, the mean GFR, proteinuria, IgA, C3 and C4 and the percentage of children without proteinuria and with normal GFR were not significantly different between A, C and O groups.

Conclusions
The treatment used in Polish children with IgAVN is adequate to the clinical and histopathological stage of the disease.

Pediatric Case Report

Date:

Sunday, 30th May 2021, 8:30 AM

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[773] SLC25A4 mutation related mitochondrial myopathy: A case with challenging clinical management and therapy intolerance

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Background

Mitochondrial disorders are a heterogeneous group of disorders resulting from primary dysfunction of the respiratory chain and are the most common form of inherited metabolic disorders with an incidence of 1 in 4000.Muscle tissue is highly metabolically active,and therefore myopathy is a common element of the clinical presentation of these disorders, although other organs,particularly those that have a high aerobic demand,such as central nervous system and heart,can be involved.

There are currently no effective,disease-modifying treatments available for the majority of patients with mitochondrial myopathies.Existing therapeutic options focus on the symptomatic management of disease manifestations.Treatment includes various vitamins, cofactors, and nutritional supplements.

Case Report

A 2-year old girl presented to the neurology clinic at the Childrens clinical University Hospital for hypotonia,lordosis and motor developmental delay.Girl was born at term weighing 3,090 g and was the first child of healthy non-consanguineous Latvian parents.At 2 months of age she was diagnosed with muscular hypotonus and physiotherapy was recomended.Neurological examination showed signs of axonal neuropathy. Magnetic Resonance Imaging was performed and showed no pathology.Echo-cardiography were normal. Girl height was 83cm and weight 10,6kg.Laboratory workup found elevated creatine kinase,lactic acidosis,elevated ketones and Krebs cycle metabolites in urine.Therefore, subsequent genetic testing were pursued.There was identified a causative variant in SLC25A4 gene.Initially patient recieved treatment with coenzyme Q10(200 mg/day) and L-carnitine(1000mg/day) adding riboflavin(140mg/day) and thiamine(60mg/day) when she developed intolerance and persistent diarrhea.After year of treatment condition of the patient is rapidly deteriorating.Treatment doses were reduced but intolerance was still remaining.Developmental delay is progressing due to persistant diarrhea,feeding and swallowing difficulties.

Conclusions

We report a case of SLC25A4-associated mitochondrial myopathy focusing on difficulties of clinical management according to patients individual intolerance.There is no specific treatment for mitochondrial disorders.The aim of symptomatic treatment is to manage symptoms and to improve the energy state by increasing and optimizing ATP production and lowering lactate levels,although there is no other treating options in case of therapy intolerance.

[785] Cerebral sinus venous thrombosis caused by extremely high level of factor VIII in a child with unstable hyperthyroidism

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Background

Central nervous ischemic episodes can be divided into arterial ischemic strokes and cerebral sinus venous thrombosis (CSVT). Both conditions are rare in pediatric population and might be overlooked in differential diagnosis. Almost 90% of strokes are associated with risk factors. The knowledge of them is crucial for fast diagnosis and even more important for prevention.

Case Report

15-years-old boy with history of Graves' disease was admitted with progressive right-sided hemiparesis, motor aphasia and focal to bilateral tonic-clonic seizures. Magnetic resonance (MR) of the brain revealed thrombosis of superior sagittal, left transverse and sigmoid sinuses with the bulb of left jugular vein and a hemorrhage in the left precentral region. Thrombophilia screening revealed significantly increased levels of factor VIII (fVIII) and von Willebrand factor (vWf), 405% and 205% respectively. Antiphospholipid syndrom, factor V Leiden and prothrombin 20210 gene mutations were excluded. Protein S, free protein S, C, antithrombin, homocysteine and lipoprotein(a) levels were within normal ranges. Thyroid parameters showed decompensated hyperthyroidism. Treatment consisted of anticoagulation with heparin and high dose of thiamazole. After 4 months of thiamazole control blood results revealed normalization of thyroid function and decrease in levels of fVIII to 161% and vWf to 81%. Successive regression of neurological symptoms and thrombosis on brain MR scans was observed.

Conclusions

Majority of strokes in children population are associated with risk factors. Awareness of them may preserve recurrent ischemic incidents in the future. Hyperthyroidism may predispose to stroke due to increased activity of clotting factors. It should be taken into account, while differentiating non-specific neurological symptoms among children with this disease.

[797] Difficulties in the diagnosis of meningitis - a case of a child with head injury

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Background

Meningitis is a potentially life-threatening condition with the mean annual incidence rate in Poland estimated to 6-8 per 100 000 children. Clinical assessment of signs and symptoms of meningitis is challenging. Delayed diagnosis, and consequently delayed effective treatment, are associated with negative clinical outcome and severe complications. The clinical manifestation can vary depending on the age of the child. Symptoms of meningitis include headache, vomiting, altered mental status and neurological signs such as seizures. Intracranial pressure and meningeal irritation, typical for meningitis, can be associated with other diseases such as trauma, haemorrhage or malignancies.

Case Report

A 7-year-old male patient was admitted to Emergency Department due to loss of consciousness after a head injury - fall from his height. Symptoms occurred 1.5 hours after the injury. Upon admission patient was unconscious and had seizures. Head CT scan didn't show any signs of intracerebral bleeding and cerebral oedema. Patient was transferred to the Intensive Care Unit (ICU) due to his critical condition. During hospitalization in ICU patient began to be febrile and the inflammatory markers started to rise. Examination of the cerebrospinal fluid suggested viral infection. Treatment with antibiotics and antiviral agents was administered. After 5 days clinical improvement was observed, and patient was transferred to the pediatric ward in order to continue treatment and further investigation. On examination meningeal signs were observed. Additional imaging tests were performed, including head CT scan, MRI and EEG and revealed ambiguous findings. His symptoms resolved gradually and he was discharged after 19 days of hospitalization. The final diagnosis was meningitis, and patient was advised further neurological investigation.

Conclusions

This case highlights that the diagnosis of meningitis requires careful investigation and precise examination. Symptoms commonly associated with meningitis occur with different frequency. Therefore, this diagnosis should be considered in every patient who presents with one of the symptoms. In presented case, additional difficulty was the head injury which initially was considered as a reason of a patient's symptoms. Hence, the differential diagnosis process should always be carried out thoroughly and with particular care.

[833] Staghorn calculi in preterm infant: case report.

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Background
The incidence of renal calcifications in newborns is low, but preterm infants with a low birth weight are more likely to develop nephrolithiasis or nephrocalcinosis, especially when other risk factors occur. Immature kidneys of preterm babies predispose for hypercalciuria, hypocitraturia, and alkaline urine. Other risk factors include: the severity of acute lung disease, long-term mechanical ventilation, long hospital stay, infections, oxalosis, vitamin D intoxication, congenital anomalies, metabolic disorders and furosemide or dexamethasone administration. Staghorn calculi is a type of urolithiasis caused by organisms that produce the enzyme urease and can be suspected in patients with recurrent urinary tract infections. Surgical treatment is the gold standard.

Case Report
The 13-month-old boy born at 28-29 weeks of gestational age was first admitted to our hospital with the suspicion of nephrolithiasis. He weighed 1220 grams at birth and at the neonate pathology department was diagnosed with: infantile respiratory distress syndrome, bronchopulmonary dysplasia and transient electrolyte abnormalities. During that hospitalization, the ultrasound showed bright reflections in the pyramids in both kidneys and the picture of calcifications in the kidneys persisted in the next scans. Besides taking antibacterial prophylaxis due to recurrent urinary tract infections, the patient had several other risk factors for nephrolithiasis, such as vitamin D overdose and duplex right kidney. During hospitalization the abdominal ultrasound confirmed calcification (15 mm length and 6 mm width) in the right kidney and he was diagnosed with staghorn calculi. Blood and urine tests showed hypercalcemia, hyperphosphaturia and an increase in the vitamin D level. Citrates, cystine, oxalates and aminogram in the urine were within the normal limits. Family history of kidney diseases was negative. At the age of 34 months the patient underwent right pyelolithotomy. During follow-up the patient was in good condition, with no significant abnormalities in tests or signs of calcifications in the kidneys.

Conclusions
Nephrolithiasis is not common in newborns, but it can occur in infants with many risk factors or recurrent urinary tract infections, as in the case of our patient. Therefore, patients with multiple risk factors, especially premature babies with a low birth weight should be carefully monitored for renal calcifications.

[850] Giant pancreatic pseudocyst - a rare complication of acute pancreatitis in children.

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Background

Acute pancreatitis (AP) has been increasingly diagnosed in children in recent decades. Common complication of AP are pseudocysts, however huge pseudocysts are rare. We report a case of giant pseudocyst of the pancreas managed in our hospital.

Case Report

A 13-year old boy with gallbladder stones and obesity was admitted due to AP and a giant pancreatic pseudocyst. Computer tomography revealed a large (18x6x9 cm) cystic lesion in epigastrium and atrophic pancreatic parenchyma. At the beginning, because of the patient's good condition, he was treated conservatively.

On the 9th day, because of the worsening of abdominal pain, dilatation of common bile duct (10 mm) on ultrasound, elevation of transaminases' (AST 282 IU/l, ALT 367 IU/l, GGTP 638 U/l) and inflammatory markers' (WBC 15350/ul, CRP 4,9 mg/dl) levels, the patient underwent endoscopic retrograde cholangiopancreatography (ERCP). Transmural drainage was not possible, because a bulge caused by compression of the pseudocyst, was seen near the major papilla. Nasocystic tube was inserted transpapillary and thick, dark fluid was obtained. During next days the pseudocyst was flushed regularly and antibiotics were included to the treatment.

Two weeks later, on endoscopic ultrasound the possibility of transgastric drainage was excluded again. During the second ERCP the beginning of pancreatic duct was dilated and a stent to pseudocyst was inserted.

During the next 3 weeks the patient's general condition improved. The pseudocyst size decreased to size 2.8x3.6x5.4 cm. The nasocystic tube and the pseudocyst's stent were removed.

Conclusions

Giant pseudocysts defined as > 10 cm is rare in paediatric population and usually require various endoscopic interventions.

[851] Co-existence of diabetes mellitus type 1 and chronic pancreatitis - a paediatric case report.

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Background
Co-occurrence of type 1 diabetes mellitus (T1DM) and chronic pancreatitis (CP) seems to be an interesting clinical phenomenon. There is very limited data regarding this topic in children. We present a case of a paediatric patient diagnosed with the two diseases - T1DM and CP.

Case Report
A 17-year-old boy diagnosed with T1DM in 2009, treated with multiple insulin injections for 10 years and history of recurrent acute pancreatitis was admitted to our hospital at the beginning of 2019 due to the signs of diabetic ketoacidosis (hyperglycemia 311 mg/dl, blood pH 7.2, base excess -10.5, symptoms of dehydration, severe epigastric pain, tenderness in the epigastrium). Blood amylase and lipase were elevated: 208 U/L and 1841 U/L respectively. Ultrasound imaging showed discretely heterogenous echostructure and hyperechogenicity of the pancreas. He was diagnosed with acute pancreatitis. The boy was immediately treated with insulin, analgesics, intensive fluid therapy and oral feeding. On the following days, the patient's condition rapidly improved and pancreatic enzyme levels normalized. It was his fourth episode of acute pancreatitis; all were associated with diabetic ketoacidosis due to incorrect insulin administration. Magnetic resonance imaging of abdomen identified parenchymal atrophy of the pancreas. CP was diagnosed. The patient was discharged home and the follow up appointment was planned.

Conclusions
Poor glycemic control in children may be associated with the higher risk of uncommon T1DM complication that is CP. Regular screening for CP should be considered in patients at risk.

[853] Postpartum infection of SARS-CoV-2 in 7 days newborn.

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Background

A new type of coronavirus SARS-CoV-2 has been discovered on 17.11.2019 in China. The disease it causes is called COVID-19 and due to it's rapid and massive spread WHO declared it as pandemic. There is a variability in the rate of infection and the course of disease in patients exposed to the virus. It has been noticed there is a lower incidence of COVID-19 among underage. Several studies suggest COVID-19 in children may be less severe than in adults and they may develop different symptoms. Infants are mainly presented with fever, cough, sore throat, headache, muscle pain, dyspnoea, vomiting and diarrhea.

Case Report

Male newborn, born by forces of nature in 41 HBD, 10/10 Apgar, 4090g weight, 55cm body length. Covid smear before childbirth was negative for both parents. 6 days after labour, mother lost sense of smell and had a fever of 38Ś°C. Covid smear on the next day was positive. The baby's father lost sense of smell and taste, but didn't do a smear. Simultaneously the newborn had a temperature of 38Ś°C. On the 7th day after birth, the boy in good condition was admitted to the Neonatal Pathology Unit at the COVID-19 Hospital. A PCR test for SARS-COV-2 was positive. The newborn was placed in an isolation room in an incubator. On the 2nd day of admission he had temperature of 37.5Ś°C. In the following days, body temperature was normal. On examination, child presented decreased leucocytosis and slightly elevated liver function tests. Neonatal conjunctivitis was also observed, which resolved with application of eye drops. The neonate was fed with formula and then with pumped breast milk. On the 4th day of isolation mother could join the infant. He was breastfed on demand and gained weight. After 12 days the neonate was discharged home with his mother.

Conclusions

Presented case is a rare example of one of confirmed cases of SARS-COV-2 infection in a child in first days after birth. It shows an example of a newborn with low-symptomatic COVID-19. Clinical manifestation was mainly raised temperature. It is worth staying vigiliant if parents have symptoms, that we can't asses in the infant, of the disease. Further observation over child's development would be desirable in order to detect the consequences of COVID-19 in the neonatal age. What should also be noticed is the necessity of isolating an infected child caused the separation of the newborn from mother for 4 days. It is unfavorable for such a small child, as the care of the mother at this time is particularly important.

[857] Is there any solution? - case report of paediatric patient with recurrent meningitis.

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Background

Recurrent bacterial meningitis (RBM) is defined as two or more episodes of bacterial meningitis with at least 3-week interval after the completion of therapy for the initial episode, or any interval if caused by different bacteria. A common risk factor for RBM in young age is anatomical abnormalities in the skull - both congenital and acquired, as presented in our case.

Case Report

We describe the case of the girl with the history of a head trauma, which caused RBM. When she was 10 months old, she fell out of bed and suffered a head trauma. Then, her parents observed a nose fluid leakage that they did not associate with the accident. After 4 months, the girl was admitted to the Department of Paediatric Neurosurgery. Two days prior a myringotomy followed by fluid leakage from the right ear caused a rapid deterioration of health. Ultimately, the girl was diagnosed with meningitis, rhinorrhoea and otorrhoea.

No indisputable cerebrospinal fluid leakage was observed in the imaging studies. Nevertheless, the osteoplastic craniotomy in the right parieto-temporal area was performed. The suspected spot of the fluid leakage was filled with Neuro-patch and tissue glue. On the 2nd postoperative day, paresis of the right facial nerve appeared. Rhinorrhoea and otorrhoea were still present. During the hospitalization, meningitis recurred twice more. It resolved quickly after antibiotic therapy.

Subsequent episodes of RBM occurred at the age of 5, 8 and 10. Afterwards, vaccination against pneumococci and meningococci was recommended by doctors and administered to the girl at the age of 10. Currently, the patient is 23 years old and no further relapses of meningitis have been observed.

At the age of 5, audiometric tests were performed. The results indicated profound sensorineural hearing loss in the right ear that could be caused by head trauma, meningitis or neurosurgical operation. There was no progression of the hearing loss in follow-up examinations.

Conclusions

Our case highlights that head trauma is a crucial risk factor of RBM. Therefore, it is essential to ask parents about child's major traumatic events from several years ago. Moreover, it is important to inform them about rhinorrhoea as a symptom of head trauma.

The presented case indicates the high vaccine efficacy against contagious diseases. Therefore, parents should be encouraged to have prophylactic vaccination administered for their children. Sometimes it may be crucial for saving their life.

[862] Thyrotoxicosis after L-thyroxine overdose in a 7-week-old patient

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Background

The prevalence of overt hypothyroidism in the general population ranges from between 0.2% and 5.3% in Europe. Hypothyroidism in infants is usually congenital, acquired causes become more common with age. Therapy is based on substitution of thyroid hormones. L-thyroxine overdose is more often observed in pediatric population compared to adults and may lead to life-threatening complications, such as seizures, arrythmias and thyroid storm.

Case Report

A 7-week-old boy presented to the Emergency Department with vomiting, loss of appetite, drowsiness and dehydration.

The patient born to a G1P1 woman, Apgar scores were 10/10. The prenatal testing revealed congenital urinary tract anomalies: left renal agenesis with coexisting renal pelvis and ureter distention on the right side. Renal function parameters were normal. Due to congenital hypothyroidism (TSH 864,589 µUI/ml, FT3 1,58 pg/ml, FT4 0,45 ng/dl) the patient was taking L-thyroxine.

On admission, the physical examination revealed: pale skin and cold extremities, CRT >2s, tachycardia (350/min.), tachypnoe, hepatosplenomegaly. After anesthesiologic intervention the infant was transferred to the Intensive Care Unit. Blood tests showed metabolic acidosis (pH 7,13), elevated serum concentration of FT4 (2,35 ng/dl) and very low level of TSH (0,06 µUI/ml). The chest X-ray revealed signs of pulmonary congestion. The assumption of arrythmia associated with thyrotoxicosis was confirmed. Therapy included administration of propranolol, adenosine, milrinone, morphine, dexmedetomidine, clonidine, fraxiparine, furosemide, Optylite with MgSO4. After the patient's condition improved, the hormonal treatment was reintroduced under ECG monitoring. No alarming symptoms were observed during increasing the dose of L-thyroxine. The patient was discharged from the hospital in good general condition. During 4-year follow-up his psychomotor development is normal, no symptoms of thyrotoxicosis were observed.

Conclusions

Hypothyroidism is the most common disturbance of thyroid gland in children, what results in a number of patients receiving lifelong hormonal replacement therapy. The maintenance of euthyroidism is critical for the neurocognitive development and growth. Early identification of hormonal imbalance is crucial for the effective management of hypothyroidism and life-threatening complications of thyrotoxicosis. It is highly recommended to educate patients and their parents about symptoms of overactive thyroid gland.

[872] Constipation, vomiting and abdominal pain during menstruation in 12-year-old girl as symptoms of Herlyn-Werner-Wunderlich syndrome.

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Background

Herlyn-Werner-Wunderlich syndrome, also known as OHVIRA (Obstructed hemivagina and ipsilateral renal anomaly), is an extremely rare abnormality of the Mullerian ducts, characterized by the presence of double uterus, unilateral cervico-vaginal obstruction and renal agenesis and/or other urinary tract anomalies.
Most cases are diagnosed after menarche through an MRI, CT or ultrasound.
There are no specific symptoms of this syndrome. Patients reported fever and vomiting during menstruation, intermenstrual bleeding and palpable abdominal, pelvic or vaginal mass. Common problem is hematometrocolpos located in not communicant uterus. It is located on the same side as renal agenesis.

Case Report

A 12-year-old girl was admitted to the Department of Pediatric Gastroenterology and Nutrition with a suspicion of constipation and dehydration. The Patient reported abdominal pain, vomiting and loss of appetite for 2 days. She also reported three-days lasting menstruation with gradually reducing bleeding for 3 months. Physical examination revealed palpable mass in left iliac area and diffuse pain.
Her medical history documented surgery of myelomeningocele, hydrocephalus, ovarian cysts, neurogenic bladder, defects of skeletal system.
USG and CT showed multiple fluid spaces, ovarian cysts, agenesis of left kidney, double uterus left with hematometrocolpos and multiple skeletal deformations.
Patient was consulted by gynecologist and, based on the clinical picture, OHVIRA syndrome was diagnosed and surgery in gynecology clinic was scheduled.
After 6 days of therapy, symptoms of constipation and pain improved and the patient was sent home. After about 2 weeks she was readmitted to the hospital due to recurrence of abdominal pain and vomiting, increasing inflammation parameters (CRP about 6 [0-1 norm], leukocytosis). Date of the surgery was accelerated and the patient was transferred to the recommended clinic.

Conclusions

The presented case highlights importance of history taking, even if we evaluate patient with common pediatric symptoms like constipation, abdominal pain and vomiting. The key information for the diagnosis was recurrence of symptoms during menstrual bleeding.

[875] Biofeedback treatment of a patient with dyssynergic defecation

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Background

Functional constipation (FC) is a significant problem in the pediatric population. It concerns about 32,2% of children. One of the most important causes of constipation is dyssynergic defecation (DD). This disorder is defined as inappropriate propulsive force (measured as intrarectal pressure) and/or inadequate relaxation of the anal canal (measured as percent of anal relaxation) observed during defecation manoeuver. The most effective tool to diagnose DD is a three-dimensional high resolution anorectal manometry (3DHRAM).

Case Report

We describe the case of the girl with the history of a head trauma, which caused RBM. When she was 10 months old, she fell out of bed and suffered a head trauma. Then, her parents observed a nose fluid leakage that they did not associate with the accident. After 4 months, the girl was admitted to the Department of Paediatric Neurosurgery. Two days prior a myringotomy followed by fluid leakage from the right ear caused a rapid deterioration of health. Ultimately, the girl was diagnosed with meningitis, rhinorrhoea and otorrhoea.
No indisputable cerebrospinal fluid leakage was observed in the imaging studies. Nevertheless, the osteoplastic craniotomy in the right parieto-temporal area was performed. The suspected spot of the fluid leakage was filled with Neuro-patch and tissue glue. On the 2nd postoperative day, paresis of the right facial nerve appeared. Rhinorrhoea and otorrhoea were still present. During the hospitalization, meningitis recurred twice more. It resolved quickly after antibiotic therapy.
Subsequent episodes of RBM occurred at the age of 5, 8 and 10. Afterwards, vaccination against pneumococci and meningococci was recommended by doctors and administered to the girl at the age of 10. Currently, the patient is 23 years old and no further relapses of meningitis have been observed.
At the age of 5, audiometric tests were performed. The results indicated profound sensorineural hearing loss in the right ear that could be caused by head trauma, meningitis or neurosurgical operation. There was no progression of the hearing loss in follow-up examinations.

Conclusions

Individual approach to each patient is the foundation of the modern medicine. In this particular case the patient was exposed to many, often painful, medical procedures, like e.g. the intestine biopsy. Biofeedback, despite not being a popular method of treatment, is an effective alternative to drugs and a way to avoid typical side effects.

[895] Infantile nephrotic syndrome due to CMV infection

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Background

Nephrotic syndrome is a rare group of symptoms that characterizes with excessive protein excretion (>50mg/kg/d), hypoalbuminemia (<2,5g/dL), hyperlipidemia and oedema. In the first year of life, it is frequently caused by genetic defects. The treatment is then symptomatic with a poor prognosis and a rapid evolution to chronic kidney disease. However, cases of infection associated nephrotic syndrome in infants were identified and can be effectively treated.

Case Report

An 8-month old boy was admitted to the hospital due to anasarca, vomiting, and fever. The first symptoms appeared 5 days before admission. Physical examination revealed: BP 104/68mmHg, HR 129/min, saturation 97%, generalized oedema, weight gain (+1,4kg). Laboratory test showed: serum creatinine 0,8 mg/dl, urea 43 mg/dl, total protein 3,8g/dL, albumins 1,8g/dL, cholesterol 427mg/dL; proteinuria 1184mg/dl. Renal ultrasound showed enlarged kidneys with elevated echogenicity. Treatment of nephrotic syndrome included: methylprednisolone, albumin infusions, furosemide. After 6 weeks no remission was achieved and steroid-resistant nephrotic syndrome was diagnosed. A viral work-up came back negative for hepatitis B, C and HIV, as well as serology for syphilis. A genetic testing showed no mutations in genes related to genetic nephrotic syndrome (i.e. NPHS1, NPHS2, WT1). Therefore, cyclosporine was started with a reduction of steroid doses. Because 6 months earlier the child has IgM anti-CMV antibodies detected, CMV tests were repeated and PCR CMV was positive. Ganciclovir was immediately started and administered for 3 weeks, then it was switched to valganciclovir for another 3 months. Proteinuria resolved after 3 months of treatment. Cyclosporine intake was sustained for a year and then gradually withdrawn. Currently, renal function parameters remain within normal limits, and there are no signs of oedema nor proteinuria, therefore no pharmacological treatment is necessary.

Conclusions

Steroid-resistant nephrotic syndrome should always be carefully investigated in children. Genetic diseases and infections should be taken into account in the differential diagnosis. Proper antiviral treatment of infantile nephrotic syndrome secondary to CMV should result in full recovery.

[900] Operation of total colonic aganglionosis (TCA)

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Background

Hirschsprung disease (HD) is a birth defect characterized by the absence of parasympathetic ganglionic cells within the distal intestine which causes gastrointestinal tract dysfunction. In the most common type, the disorder does not extend beyond the proximal part of the sigmoid colon. In the presented case, aganglionosis involves the entire colon as well as a part of the small intestine proximal to the ileocaecal valve. Due to the extent of the disorder, in this type of HD, the entire segment responsible for water and electrolytes absorption is malfunctioning. This form of the disease is characterized by poorer long-term treatment effects and a lower quality of life for the patients.

Case Report

A 3-day-old boy was admitted with an interstinal obstruction caused by the lack of proper bowel innervation. A colostomy was performed. At the age of 5 weeks, as the symptoms recurred, the patient was hospitalised again and diagnosed with Hirschsprung disease. A resection of 20cm of the terminal ileum with enterostomy was performed and the sigmoid was sewn up. At the age of 9 months the boy was once again admitted to the hospital ward for radical corrective surgery. Using the Duhamel-Martin-KaliciŃski method, the continuity of the GIT was recreated.
During the procedure, the remaining aganglionic segment was removed except for the distal part of rectum. The anastomosis of the rectum and the ganglionic segment of the small intestine was performed.

Conclusions

As the effect, the neorectum was formed. The main function of it is the preservation of the proper water and electrolytes absorption as well as the prevention of persistent diarrhoea. After the operation, the boy was in good general condition.

[1049] A rare case of sciatica in 14-year-old boy

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Background
Piriformis pyomyositis is defined as a subacute infection of skeletal muscles probably caused by transitory bacteriaemias associated with systemic infectious symptoms. Pyomyositis of the piriformis muscle is an uncommon condition, an infection very rarely reported in the paediatric age group. In this case study, the 14-year-old boy with pyomyositis of the piriformis muscle and symptoms of sciatica is presented.

Case Report
A 14-year-old boy was admitted to the neurology department with symptoms of right sciatica for 2 days, which appeared after intense exercise. He was in a stable, severe general condition. The severe pain in his lower back radiated to the right buttock, leg and foot. Neurological examination of the right lower limb revealed reduced muscle power and tension signs were positive. The inflammatory markers were elevated. He was feverish, the antibiotic therapy was started with ceftriaxone i.v., after serological examination S. aureus was cultured therefore cloxacillin was added. On day 3 the MRI was done and it revealed pyomyositis of the piriformis muscle, lesion of 75x35mm and the inflammated sacroiliac joint. After two days of treatment, the patient's condition worsened, so the controlled MRI was performed. The dimensions of the abscess enlarged by 91 x 65 mm. The decision of surgical treatment had been made. During the surgery, under ultrasound control using abdominal transducer, the piriformis abscess was opened and drained transrectally. A drain was left and sutured to skin around the anus. In the next days, the patient's clinical condition was gradually improving. The control MRI 6 days after the surgery revealed the regression of lesions. The inflammatory markers decreased. After 21 days of hospitalization patient was discharged with continuation of antibiotic therapy (trimethoprim + sulfamethoxazole p. o.) at the maximum dose for 3 weeks. During the follow-up, the patient faced significantly reduced pain symptoms and resumed normal activities.

Conclusions
Pyomyositis is a rare condition but it is essential to be aware of this condition and to consider abscesses and pyomyositis of the pelvic muscles as a differential diagnosis in patients presenting with radicular pain and inflammatory symptoms. Early diagnosis and correct treatment could save the patient from severe complications such as septic shock.

[1064] It is not a piece of cake - Hereditary Fructose Intolerance diagnosed in the 1-year-old boy - Case Report.

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Background
Hereditary Fructose Intolerance (HFI) is an autosomal recessive disease caused by deficiency of enzyme aldolase B, which plays a key role in fructose metabolism. Absence of aldolase B results in accumulation of fructose-1-phosphate and fructose-1,6-bisphosphate and thereby impairs glycolytic and gluconeogenic pathways. HFI symptoms occurs typically then fructose- or sucrose-rich products are introduced into an infant's diet. Despite poor appetite, vomiting, no weight gain, proteinuria, hepatomegaly, hypoglycaemia, disorder can remain undiagnosed for years.

Case Report
1-year-old boy was admitted to county hospital because of poor appetite and failure to thrive. Laboratory tests revealed: normal inflammatory markers and renal parameters, elevated transaminases (ALT - 156 U/L, AST - 87 U/L); in urinalysis: proteinuria - 87mg%. Abdominal ultrasound was standard. Due to proteinuria patient was transferred to Department of Paediatric Nephrology .
On admission, the boy was in a good general condition, body weight: <3 percentile, blood pressure: 93/43 mmHg, heart rate: 120/min, oxygen saturation: 98%. Physical examination revealed features of underweight and hepatomegaly. Laboratory testing revealed elevated ALT - 323 U/L and AST - 346 U/L, proteinuria up to 160 mg%. Glomerulonephritis was excluded (C3, C4, immunoglobulins were unremarkable). He had history of diarrhea in the last 2 months after introduction of sweet nourishment (apple juice). Significant family history: grandfather underwent nephrectomy and grandmother suffered from pyelonephritis. Considering metabolic disease clinicians performed: gas chromatography-mass spectrometry (GS-MS) and blood tests for congenital disorders of glycosylation (CDG) - 37,6 %CDT. Diagnosis of HFI was confirmed in genetic testing. The patient was discharged home with recommendation contained strict dietary avoidance of fructose, sucrose, sorbitol, and related sugars.

Conclusions
Proteinuria is a worrying symptom and requires broad spectrum of differential diagnosis including renal diseases and metabolic disease like HFI. Disease may be successfully treated with strict fructose-free diet. Early diagnosis correlates with good life expectancy and child's growth although liver failure and then death of undiagnosed patients were observed.

[1089] When the left is on the right - Kartagener syndrome as a manifestation of multiorgan ciliopathy

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Background

Cilia are a regular structures that perform a motor function in the human body. Thanks to the cooperation of millions of these small structures many systems and organs can work properly. Ciliopathies are group of genetic diseases connected with incorrect structure of cilium and flagella. As a result of being in a multiple human organs (such as brain, eye, kidney, respiratory system or liver) their malfunction can lead to numerous clinical symptoms. As an example of ciliopathy we can discus primary ciliary dyskinesia which is estimated with an incidence 1 in 20 000. Around half of the patients with primary ciliary dyskinesia (PCD) are diagnosed with Kartagener syndrome in which we can perceive characteristic triad: chronic sinusitis, bronchiectasis and situs inversus. Renal manifestation of ciliopathy occurs as cysts presence.

Case Report

11-year-old boy was admitted to the hospital for planned diagnose of hydronephrosis. In the medical history the patientreported chronic infections of the upper respiratory tract and nasal congestion. Because of the suspicion of allergic rhinitis andbronchial asthma patient was receiving an anti-allergy medications (orally and inhaled) without improvement. A physical examination showed a total inversion of the viscera. Basic laboratory tests of blood and urine was correct. Basing on the clinical picture doctors suspected Kartagener syndrome. The diagnosis can be made by the assessment ofnasal nitric oxide measurement, microscopy analysis for the evaluation of ciliary motility or genetic tests (DNAI1 and DNAH5 are the two most common genes associated with PCD). The patient’s treatment is only symptomatic and focused on slowing down progression of the lung disease.

Conclusions

1. In any patient with inversion of the viscera the ciliopathy’s diagnosis is indicated.
2. In differential diagnosis of recurrent infections of respiratory tract among children doctors have to remember about primary ciliary dyskinesia.
3. Early diagnosis of Kartagener syndrome and start of treatment can slow down progression of the chronic lung disease.

[1121] Unique does not mean impossible: sporadic tularemia in a toddler presented with complicated disease course.

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Background

Tularemia is an acute zoonosis caused by Francisella tularensis - Gram-negative, aerobic and intracellular coccobacillus which frequently escape the phagosome. The clinical presentation of tularemia, comprising 6 different entities, vary depending on the way it enters the body. Illness ranges from mild to life-threatening, but all forms are accompanied by high fever and severe reactive inflammation characterized by shivers, headache, weakness, throat and muscles pain. The most common form is ulcerative-glandular type, usually acquired thorough tick bite. The infection occurs due to direct contact of human with an infected animal or arthropod bite.

Case Report

One-year old patient was admitted with severe normocytic anemia, high fever, hepatosplenomegaly. A purulent lesion in the axillary region with a homonymous nodal reaction was found. Tick-bite history was noted there. Morphology revealed no thrombocytopenia and inconsiderable leukocytosis and granulocytosis. Primary differentiation included leukemia, lymphoma, mononucleosis, borrelial pseudo-lymphoma and simple abscess with fever and anemia. Therefore antibiotic cefuroxime was used. All of the above were excluded, so further diagnosis focused on tick-borne diseases: TIBOLa or Anaplasmosis. Ulcerative-glandular form of tularemia was proved at the end. Child received gentamicin course according to the CDC guidelines.

Conclusions

Beside the fact that tularemia is unique diagnosis nowadays, it is still necessary to include this disease in differentiation of hardly resolving tick-bite abscess and lymphadenopathy. Diagnostic vigilance is a key to effective treatment and helps to reduce the spread of this highly contagious agent as early as possible by immediate patient's isolation.

Pharmacy

Date:

Sunday, 30th May 2021, 12:30 PM

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POLSKIE TOWARZYSTWO STUDENTÓW FARMACJI

[798] Seasonal analysis of vitamin D hydroxyl metabolite plasma concentrations in patients with cardiovascular disease and its correlation with cardiac medications

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Introduction

Vitamin D deficiency (VitDd) is associated with cardiovascular diseases (CVD). Since the sun is the primary source of vitamin D production, seasonal changes can substantially influence the plasma level of 25-hydroxyvitamin D, 25(OH)D3 and 25(OH)D2.

Aim of the study

This study aims to measure vitamin D hydroxyl metabolite concentrations in blood plasma and to assess their relation to the seasons and medications given to CVD patients.

Materials and methods

A total of 116 blood samples were collected from 58 CVD patients in two different seasons of the year, in autumn-winter and spring-summer. UPLC-MS/MS validated method was applied to determine 25-hydroxyl metabolites of vitamin D in patients' plasma. P-value < 0.05 was considered statistically significant.

Results

Only 9% of patients had 25(OH)D3 concentrations in the recommended range of 30-50 ng/mL. 25(OH)D3 average levels were significantly higher in spring-summer period compared with autumn-winter period (Z=3.21; P=0.001). Older patients had a higher risk of VitDd in autumn-winter [OR=1.08; P=0.011, OR=0.32; P=0.015] respectively. 25(OH)D2 average concentrations among seasons were insignificant (Z=1.04; P=0.3). VitDd was significantly correlated with administration of ARB (OR=7.49;P=0.025), steroidal antiandrogen*age (OR=1.039; P=0.022). Other medications found to encounter VitDd, 0.9% NaCl (OR=0.2; P=0.04) and thiazide (OR=0.076; P=0.015). Hypertension was significantly correlated with body mass index (BMI) (OR=0.27; P=001), obesity*hypercholesterolemia (OR=22; P=0.049), overweight*smoking (OR=91; P=0.001), weight (OR=1.15; P=0.038), and hypercholesterolemia (OR=0.08; P=0.008). Besides, heart failure was significantly correlated with age (OR=1.4; P=0.02), hypercholesterolemia*BMI (OR=3.4; P=0.023) and weight (OR=11.23; P=0.04).

Conclusions

The majority of CVD patients in this study are vitamin D deficient. Seasonal variation and impact of age have been statistically confirmed at least for 25(OH)D3 levels. Obesity and hypercholesterolemia, overweight, and smoking are the major risk factors for hypertension, while, weight and hypercholesterolemia combined with higher BMI were the lead risk factors for heart failure. Administration of steroidal antiandrogen and insulin decreased 25(OH)D3 levels by 76% and 67% respectively. The treatment with 0.9% NaCl and thiazide increased analyte concentrations by 24% and 58% respectively.

[799] Comparison of ultrastructural changes in HaCaT cells induced by podophyllotoxin and its derivate, KL3

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Introduction

Cancers remain a second cause of death in the developed countries. Despite intensive research, there is still a need for effective anti-cancer drugs. Many of the drugs are naturally occurring substances, like podophyllotoxin (PTX). PTX turned out to be too toxic for systemic use. Modifications of PTX molecule -resulted in etoposide and teniposide that are less toxic and anticancer effective.

Inspired by these molecules our team in cooperation with chemistry department of Warsaw University invented, created and studied a new derivative of PTX with attached benzothiazole ring called KL3.

Aim of the study

Our previous research showed that KL3 is cytotoxic against cancerous cell lines such as HeLa or PC3. We aimed here to examine safety profile of KL3 and PTX in non-cancerous keratinocytes HaCaT.

Materials and methods

Cell viability was measured by examination of the ATP level by using CellTiter-Glo Assay. Changes in the ultrastructure of HaCaT cells under KL3 and podophyllotoxin treatment were examined with transmission electron microscope (TEM). Then we conducted a morphometrical analysis of the mitochondria, endoplasmic reticulum and cellular processes and validated correlations by using student's t-test.

Results

In contrast to podophyllotoxin KL3 at the concentration of 1ÎĽM does not affect cell viability significantly. Both KL3 and podophyllotoxin induces stress of endoplasmic reticulum, alteration of mitochondrial morphology and elongation of cytoplasmic processes. However, most of the changes induced by KL3 are transient and reversable after 48h thanks to adaptive mechanisms such as enhanced autophagy.

Conclusions

Our analysis showed that KL3 is less toxic than podophyllotoxin and it is safe to non-cancerous cells such as HaCaT. Most of the morphological changes induced by KL3 are reversable thanks to cell regeneration mechanisms such as enhanced autophagy and endoplasmic reticulum stress.

[844] The influence of simulated digestion on antioxidant activity of selected monoterpenes

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Introduction

Natural antioxidants play major role in various parts of life such as medicine, pharmacy and food industry. Monoterpenes form one of the groups of antioxidants exhibiting good antiradical activity. Nevertheless it is known that all biological activities, to a large extent, depend on studies conditions. In addition, in vitro activity is often differs from these obtained in in vivo conditions. An additional aspect is fact that bioactive compounds during digestion can be available for absorption especially in the intestine and promote biological action. A significant factor having influence on biological activities is pH. Simultaneously this factor has pivotal influence on digestion process.

Aim of the study

The aim of presented studies was evaluation of pH influence on antioxidant activity of selected group of monoterpenes in two stages of simulated digestion: gastric and duodenal.

Materials and methods

Basis of studies was group of selected natural monoterpenes (Î±-phellandrene, Î±-terpinene, citral, menthone, carvone, Îł-terpinene, isopulegol, terpinene-4-ol, linalool, eucalyptol, Î±- and Î¸-pinene, p-cymene, citronellal). Research were performed based on simulated digestion procedure with two stages: gastric and duodenal. The influence of the conditions on antioxidant activities were evaluated with use of DPPH assay.

Results

Studies revealed significant differences in antioxidant activities of monoterpenes in reference to simulated digestion. The differences in the activity were observed both after gastric and duodenal stages as well as within the same stage in terms of water or oil phase. The highest antioxidant activity was observed for Îł-terpinene which revealed above 94% activity for two stages in oil phase. Slightly lower activity was observed for Î±-terpinene (water phase) and citral (oil phase) with activity on level 90%. Significant influence of simulated digestion conditions on antioxidant activity was observed in almost all monoterpenes.

Conclusions

Simulated digestion revealed various influence on free radical scavenging ability of monoterpenes nevertheless in most cases activity was higher than in standard DPPH conditions. The most valuable activity was observed for samples collected from oil phase in both digestion stages. Probably this fact results from lipophilic character of studied compounds. The obtained results suggest that antioxidant activity of the secondary plant metabolites can be maintained in intestine leading to more effective free radical scavenging.

[855] zOPT: a method for imaging craniofacial cartilage of the ext2ˆ'/ˆ' zebrafish embryos

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Introduction

Heparan sulfate (HS) is a type of glycosaminoglycan (GAG) present in the extracellular matrix and on cell surfaces. HS plays a role in the development in the central nervous system. Mutations in the exostosin (Ext) gene family lead to disruption of the biosynthesis of HS. Ext genes are necessary for forming a complex in the Golgi compartment which catalyzes chain elongation in HS formation. Mutations in human Ext genes cause the disease Multiple Hereditary Exostoses (MHE), whereas in zebrafish (ext2) it has been shown to cause defects in craniofacial cartilage and lack of pectoral fins. Recent developments in open-source optical projection tomography (OPT) allows for an inexpensive alternative to traditional microscopy. The zebrafish optical projection tomography (zOPT) is a cheap 3D imaging system applied to the alcian blue stained zebrafish in brightfield.

Aim of the study

The aim of the study was to verify if zOPT method could be used for detection of phenotypical differences in the craniofacial cartilage of the ext2ˆ'/ˆ' zebrafish embryos.

Materials and methods

In the present study, zebrafish embryos were used as a model to investigate the effects of homozygous loss of function of the ext2 gene. Zebrafish AB strain fish carrying ext2 mutation were sampled at several time points. Embryos were euthanatized and their cartilage was stained with Alcian blue. Acid free alcian blue staining protocol, allowing for post-staining genotyping of imaged embryos was developed and tested.

Results

Obtained results are part of ongoing gene function research focused on method development.

Conclusions

We conclude that zOPT is a sufficient method to quantify differences in mutant and wild-type craniofacial cartilage in zebrafish embryos at 6dpf, as tested using ext2 gene knock-out zebrafish. zOPT continues to be developed to visualize and analyze a wide range of zebrafish phenotypes, as we demonstrated in our study.

[886] Physicians' opinion on adverse drug reactions

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Introduction

Adverse drug reaction (ADR) is a serious medical problem for any physician. High competence in potential risk of ADR enables administration of drugs rationally with minimal risk for a patient's health.

Aim of the study

The main aim of our study was to assess physicians' awareness of ADRs.

Materials and methods

An anonymous on-line survey of Russian-speaking physicians was done. The visitors of website www.antibiotic.ru has a survey about ADRs in their practice. Doctors of Smolensk Region Hospital participated in the survey by filling out the same printed questionnaire.

Results

There were 146 respondents (56.2% - online, 43.8% - in written form). Nineteen (12.8%) of them worked in outpatient departments, and 121(81.2%) -in inpatient departments. There were 23(15.9%) therapists, 56(38.6%) surgeons, 10(6.9%) pediatricians, 32(22.1%) clinical pharmacologists. The most respondents (82.9%) consider ADR as a serious problem. ADRs in physicians' practice were caused by antibiotics (38.4%), nonsteroidal anti-inflammatory drugs (NSAID) (19.9%), antihypertensives (9.7%), glucocorticoids (8.7%), tranquilizers (5.4%), cardiac glycosides (4.5%), others (9.7%). Clinical manifestations of ADRs involved skin (27.3%), gastrointestinal tract (24.3%), respiratory system (10.6%), blood (10.3%), central nervous system (8.0%), multiple organ dysfunction syndrome (7.8%), cardiovascular system (6.9%), urinary system (3.9%). Serious adverse events (SAEs) were diagnosed by 59(42.1%) physicians. The SAEs were caused by antibiotics in 21(28.4%) cases, NSAID in 14(18.9%), glucocorticoids in 4(5.4%), contrast medias in 7(9.5%), antihypertensives in 3(4.1%). ADRs were always reported in source documents by 82(58.6%) respondents, frequently - 23(16.4%), occasionally - 23(16.4%), rarely - 9(6.4%), never - 2(1.4%). Reasons for rare and occasional recording were a lack of knowledge (37.5%), a lack of time (18.8%), a fear of authorities (18.8%), an opinion of unimportance of ADRs (6.3%) and a feeling of incompetence (6.3%). Only 57.8% outpatient clinic physicians always or frequently reported ADRs, but 72.7% did it in inpatient departments.

Conclusions

Physicians are commonly face ADRs in their practice. Antibiotics and NSAID are the most common reason of ADRs in both Outpatient and Inpatient Departments. Skin and gastrointestinal tract ADRs comprise more than half among all ADRs.

[894] How can the addition of xanthan gum affect the antioxidant potential and polyphenol content of gluten-free functional food?

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Introduction

Gluten intolerance (also associated with autoimmune diseases) and celiac disease are health problems that more and more patients struggle with. There are products on the market labeled as gluten-free, but often their nutritional quality is much poorer than traditional products. The lack of gluten has a significant impact on the structure and quality of finished products. This results in changes in crunchiness, moisture absorption and other characteristics.

Aim of the study

The aim of the experiment was to design, produce and research an innovative range of functional gluten-free food - gluten-free maize-field bean paste with the addition of xanthan gum as a substance furtherance texture. The antioxidant potential and the polyphenol profile of the products were tested. Polyphenols have a broad pharmacological effect - anti-radical, cholesterol-lowering, anti-atherosclerotic, anti-viral, anti-mutagenic and others.

Materials and methods

Extraction gluten-free maize-field bean paste with the addition of xanthan in an ultrasonic bath (UAE - ultrasound-assisted extraction) was performer. The analysis of the antioxidant activity was done by spectrophotometric analysis1 1w1i1t1h1 1D1P1P1H1 1a1n1d1 1T1L1C1-1D1P1P1H1.1 1T1h1e1 1c1h1r1o1m1a1t1o1g1r1a1p1h1i1c1 1a1n1a1l1y1s1i1s1 1(1h1i1g1h1-1p1e1r1f1o1r1m1a1n1c1e1 1l1i1q1u1i1d1 1c1h1r1o1m1a1t1o1g1r1a1p1h1y1 1a1n1d1 1e1l1e1c1t1r1o1s1p1r1a1y1 1i1o1n1i1z1a1t1i1o1n1 1m1a1s1s1 1s1p1e1c1t1r1o1m1e1t1r1y1

Results

By HPLC-MS / MS metod ten phenolic acids were identified and quantified. These were: 4-OH-benzoic, vanilic, trans-ferulic, cis-ferulic, trans-caffeic, cis-caffeic, protocatechuic, trans-p-coumaric , cis-p-coumaric, trans-sinapic and cis-sinapicacids. The addition of 0.25, 0.50 and 0.75% xanthan gum to pasta did not significantly affect the content of polyphenols. However, at 1.00% xanthan gum, the phenolic acid content was much lower. This may be due to the formation of bonds between the resin and phenolic compounds with strong binding of polyphenols to the xanthan surface. Similarly, the antioxidant potential (measured by two methods) decreased with 1% of the enrichment additive.

Conclusions

A new assortment of functional gluten-free food with good technological parameters and pro-health antioxidant properties was developed and produced. This is a chance for people who are gluten intolerant or suffering from celiac disease to enrich their daily diet with healthy pasta.

[989] Assessment of the influence of gut microbiota on the chemical composition of natural products applied in anxiety and mood disorders.

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Introduction

Mental disorders are one of the main causes of disability in the developed countries, overcoming illnesses such as coronary diseases and cancer. Research in the field of natural products pharmacology revealed many promising medicines that may provide benefits in treatment of anxiety and mood disorders. Microbiota that colonizes intestinal tract regulates the host immune response and production of several hormones and neurotransmitters, what contributes to so called gut-brain axis. That indicates the potential that microbiota may have in treating mood disorders. Both plant-based medicines and gut microbiota aspects seems to be an interesting direction in search for novel therapeutic strategies.

Aim of the study

The aim of the study was to assess how chemicals found in herbal and fungal preparations applied in treatment of mild mood disorders are metabolized by human gut microbiota and chosen probiotic microorganisms ex vivo.

Materials and methods

Basing on the conducted literature research, the following natural products were chosen for examinations: Hypericum perforatum (St John's wort), Piper methysticum (Kava), Passiflora incarnata (passionflower), Valeriana officinalis, Ganoderma lucidum (Reishi), Crataegus sp. (Hawthorn), Humulus lupulus (Hops). From these natural products 70% ethanolic extracts were prepared and their composition was analysed with HPLC-DAD-MS method. The metabolism of the extracts by human gut microbiota was examined ex vivo by their incubation with fecal samples in Bactron anaerobic chamber followed by HPLC-DAD-MS analysis. Chosen extracts were additionally subjected to metabolism studies using isolated or commercially available probiotic strains.

Results

Significant changes were observed in chemical composition of chosen natural products after their incubation with human gut microbiota ex vivo. Interesting novel metabolites were observed and their identification was tentatively conducted. Some changes were also observed after incubation with chosen probiotic strains.

Conclusions

The results indicate that microbiota changes the chemical composition of chosen natural products. Compounds resulting from the intestinal bacteria metabolism of extracts can contribute to their positive effects on the central nervous system. Although examined natural products appear to be a promising source of biologically active microbial metabolites, more research is needed to fully evaluate their potential role in treatment of anxiety and mood disorders.

Surgery

Date:

Saturday, 29th May 2021, 8:30 AM

Jury:

Prof. dr hab. med. Magdalena Durlik
Prof. dr hab. med. Zbigniew Gałązka
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Otolaryngologia Polska

Otolaryngologia Polska
Polish Journal of Otolaryngology (Otolaryngol Pol)

[842] Is left subclavian artery closure a safe procedure?

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Introduction

In some cases of Thoracic Endovascular Aortic Repair (TEVAR) it is necessary to cover the Left Subclavian Artery (LSA) in order to achieve sufficient proximal sealing zone. Coverage of the LSA may cause steal syndrome and may result in stroke, spinal cord ischemia and ischemia of left upper extremity. Currently, revascularization of LSA remains debatable.

Aim of the study

The purpose of this study was to assess postoperative complications after TEVAR with LSA Coverage.

Materials and methods

Endovascular treatment planning was based on computed tomography (CT) angiography. The diameter and patency of the left vertebral artery was concerned in all cases where LSA coverage was necessary. 60 patients with aneurysm of descending thoracic aorta or type B aortic dissection were operated between 2015 and 2019. In 20 patients LSA coverage was performed (Group A). The remaining 40 patients (Group B) had patent LSA. Anemia prevention and treatment was provided in perioperative care. Medical data including CT scans of all patients were analyzed concerning length of stent graft, type of disease (aneurysm or dissection) and complications in the first 30 postoperative days.

Results

25 women (41.7%) and 35 men (58.3%); mean age 65.8 +/- 12.5. Mean length of stent grafts was 22.4 cm ŚĪ 7.9. Age and length of stent did not differ significantly between groups A and B (p=0.31 and p=0.49, respectively). LSA revascularization was performed in 2 of 20 (10%) patients from group A with narrow left vertebral artery (under 3 mm in diameter). Rate of postoperative complications was not significantly different between groups A and B (p=0.11). Postoperative period was uneventful in all 40 patients of group B. Ischemia of the left upper extremity occurred in 2 patients of group A (10%). One patient required a carotid-subclavian bypass. Ischemia resolved after surgery. Second patient was left handed and moderate ischemia had temporary impact on hand function, but resolved after rehabilitation. Patient refused revascularization.

Conclusions

Coverage of LSA seems to be a safe method whenever it is necessary in order to achieve proximal sealing zone while stent grafting the thoracic aorta. However, it is crucial to take all precautions to avoid possible complications.

[874] Ultrasound guided transhepatic access for thoracic duct catheterisation - is it a safer approach?

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Introduction

The thoracic duct is the main lymphatic drainage of the abdomen and lower limbs, thus a leak or impairment in its flow may lead to serious complications. Lymphorrhea leading to chylothorax is a rare condition arising from thoracic surgeries and traumas, yet its mortality rate reaches 50%. Plastic bronchitis is another complication of an underlying disease, which impairs the lymph flow. Such cases may be treated with lymphography guided selective thoracic duct ligation.

Aim of the study

To assess the safety, topographic relations and accessibility to the retroaortic space of a potential transhepatic thoracic duct access.

Materials and methods

The study involved 18 healthy volunteers aged from 21 to 47 examined using LOGIQ F8 GE ultrasound at approximately the level of xiphoid process. The site of the access was characterised by the distance to the process, direction of the transducer and its angle. The ultrasound measurements involved the potential distance of a needle to the standard location of the thoracic duct and the thickness of the left lobe of liver in its way. All major vessels in the area, that could potentially be perforated were identified and measured.

Results

The standard location of the thoracic duct was successfully identified in 16 cases. The site of access ranged from 2 to 9 cm below the xiphoid process, the direction of the transducer ranged from 0 to 60 degrees from sagittal plane and its angle from 60 to 90 degrees. In 2 cases (12.5%) the portal and hepatic veins overlapped making the access relatively unsafe. In 8 remaining cases the veins were also identified as a potential threat, but were easily avoidable. In 2 cases the coeliac trunk and its branches were identified as a potential threat.

Conclusions

The transhepatic thoracic duct access seems to be relatively safe, as major vessels are rarely an unavoidable obstacle. The only structure the needle would perforate is the liver with low risk of puncturing the aorta, the colon or the stomach. Puncturing the liver should also stabilise the needle and reduce the risk of its deflection, which may happen by puncturing the colon. The ultrasound-guided transhepatic access also provides with a good visibility of the anatomical structures on the route of the needle, unless there is excess gas in the abdomen.

[881] STUDY OF SURGICAL SUTURE MATERIAL MECHANICAL PROPERTIES

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Introduction

Absorbable and non-absorbable suture material with atraumatic needles is common in surgery. Physical structure and chemical qualities of suture material can influence operation outcomes. There still exists a shortage of information on biomechanical properties of common suture material.

Aim of the study

The aim of the study was to give a comparative characteristic of such mechanical property of absorbable and non-absorbable surgical ligatures as breaking force.

Materials and methods

The following suture material was investigated: "Vicryl" USP 4-0 ("Ethicon", Johnson & Johnson, USA); "PGA" USP 4-0 ("Lintex", Russia); "Prolene" USP 4-0 ("Ethicon", Johnson & Johnson, USA); "Monophyl" USP 4-0 ("Lintex", Russia). Group of 10 samples 15 cm length of "Vicryl" in native state without knots was compared with the group of 10 samples 15 cm length of "PGA" in native state without knots. Group of 10 samples 15 cm length of "Prolene" in native state without knots was compared with group of 10 samples 15 cm length of "Monophyl" in native state without knots. Group of 10 samples 15 cm length of "Vicryl" with a simple knot was compared with group of 10 samples 15 cm length of "PGA" with simple knot. The breaking force was measured with hydrodynamic water load designed by authors. Breaking force, point of rupture and test duration were recorded for every sample. Statistical processing was performed using AtteStat 12.0.5 software package. Mann-Whitney U test was used.

Results

Among compared absorbable suture materials without knots "Vicryl" breaking force was higher than "PGA" (Ń€<0,05): distribution median of "Vicryl" breaking force - 25,28 H; distribution median of "PGA" breaking force - 18,87 H. Among compared non-absorbable suture materials without knots "Prolene" breaking force was higher than "Monophyl": distribution median of "Prolene" breaking force - 15,46 H; distribution median of "Monophyl" breaking force - 14,80 H. Among compared absorbable suture materials with simple knot "Vicryl" breaking force was higher than "PGA": distribution median of "Vicryl" breaking force - 14,16 H; distribution median of "PGA" breaking force - 13,43 H.

Conclusions

Absorbable suture material "Vicryl" (USA) has greater tensile strength than absorbable suture material "PGA" (Russia). Non-absorbable suture material "Prolene" (USA) has greater tensile strength than non-absorbable suture material "Monophyl" (Russia). Further investigations can give better understanding of mechanical properties of common surgical material.

[916] Neuroendocrine pancreatic tumors as risk factor pancreatic fistula formation after distal pancreatectomy

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Introduction

There are many risk factors of pancreatic fistula formation after distal pancreatectomy, of which pancreatic stump closure techniques are the most common, but also type of pathology is important. Some studies propose pancreatic neuroendocrine tumors (PNET) as independent risk factor of pancreatic fistula (POPF). Due to improved diagnosis, especially of PNET, even small tumors can be detected. Therefore distal pancreatectomy has become an increasingly common procedure.

Aim of the study

The aim of this study was to describe POPF occurrence after distal pancreatectomy for PNET.

Materials and methods

Forty patients after distal pancreatectomy with hand-sewn remnant closure were retrospectively analyzed. Patients were divided into two groups by pathology: with PNET and with other tumors (adenocarcinoma, cystic tumors, Intraductal papillary mucinous neoplasm (IMPN), pancreatic metastasis of renal cell carcinoma, adenosquamous carcinoma, islet hyperplasia, accessory spleen, mixed acinar-neuroendocrine carcinoma). Pancreatic fistula was defined according to the International Study Group of Pancreatic Surgery (ISGPF) definitions. Exclusion criteria: immunosuppressive and steroid therapy, complicated acute pancreatitis in the past, chronic pancreatitis, pancreatic surgery, endoscopic sphincterotomy of the papilla of Vater, pancreatic duct stenting.

Results

Nine patients (22.5 %) had PNET, while thirty-one (77.5%) had other tumors. POPF rate (B and C) for PNET was 44.4 % and for other tumors was 22.6%, p- 0.227

Conclusions

Despite the lack of statistical significance, may be due to the limited sample size of forty, higher rates of POPF were found in the group with PNET than in group with other tumors. This strongly indicates that there is a need for future study of this area with a larger sample size.

[942] Cosmetic results of the external nose reconstruction

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Introduction

Reconstruction of the external nose (EN) is an extremely complex operation, the main criterion for the success is a cosmetic indicator.

Aim of the study

To analyze the cosmetic results of EN reconstructions with a frontal flap by interviewing patients and experts.

Materials and methods

The results of 38 EN reconstructions (22 women and 16 men) were evaluated. The average age of the patients was 64.12±11.97 years. Cosmetic parameters (tip, wing, back of the nose, size of the nostrils, skin color, nose position, general appearance of the nose) were evaluated by the patient and three independent experts on a 5-point scale of the Nasal Appearance and Function Evaluation Questionnaire (NAFEQ) 12 months after reconstruction. Comparison - Student's criterion for two unrelated groups, the criterion of significance of the difference $p<0.05$.

Results

When analyzing the data obtained, the following was found: the average score of patients for the tip of the nose was 4.87±0.41 points. The average expert rating for the tip of the nose is 4.68±0.66 points. The appearance of the nose wing was evaluated by patients on average by 4.45±0.72 points. The average expert assessment for this anatomical part is 4.18±0.93 points. The average score of patients for the nasal dorsum was 4.71±0.65 points. Experts estimated the back of the nose at an average of 4.57±0.76 points. Nostrils size - the average score of patients was 4.53±0.73 points; the average score of experts was 4.29±0.89 points. Nose skin color - the average score of patients - 4.66±0.53 points, the average score of experts - 4.71±0.46 points. The position of the EN - the average score of the patients was 4.84±0.37 points, the average score of the experts was 4.68±0.57 points. The general appearance of the nose after reconstruction was estimated by patients to 4.42±0.68 points, by experts to 4.26±0.76 points. The difference in the experts 'and patients' scores has no statistically significant difference, $p<0.05$ in each comparison pair.

Conclusions

As a result of the study, it was found that the assessment of patients and experts does not significantly differ in each parameter. The general type of EN was estimated at 4-5 points (good and excellent result) by patients - in 34 cases (89.47%), by experts - in 33 cases (86.84%).

[950] SNOT-22 questionnaire result comparison in case of primary and recurrent nasal polyps

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Introduction

Chronic rhinosinusitis is a widespread inflammatory disease that affects the quality of life and productivity of a patient associated with health (Ting et al., 2018). The overall prevalence of symptom-based chronic rhinosinusitis in the population corresponds to a value between 5.5% and 28% (Fokkens et al., 2020). The Sino-nasal outcome test (SNOT-22) is an easy-to-fill questionnaire containing 22 questions about the symptoms and social/emotional consequences of chronic rhinosinusitis. The SNOT-22 test can be reused, thus clearly depicting the results of medical and surgical interventions over time (Marambaia et al., 2016).

Aim of the study

To compare the SNOT-22 questionnaire results, as well as prevailing chronic rhinosinusitis patients' complaints in case of formation of primary and recurrent polyps.

Materials and methods

Study participants completed the SNOT-22 questionnaire before surgery. Results were evaluated and compared between patients with formation of primary and recurrent polyps. Analysis of data was done using IBM SPSS Statistics 23. Data analyzed with Kolgomorov-Smirnov test, Pearson's Chi2 test, Fisher's Exact test, Student's T test and Mann-Whitney U test.

Results

The study included 23 participants - 7 women and 16 men. The participants' mean age is 51.8 (±15.6) years. The primary polyp group included 9 cases (39.1%), recurrent polyp group - 14 cases (60.9%). The average SNOT-22 score of the primary polyp group is 54.33 (±18.43) and the average score of the recurrent polyp group is 50.14 (±13.91). There were no statistically significant association between primary polyp group and recurrent polyp group (p=0.41). Symptom prevalence in patients with the formation of primary polyps: need to blow nose 64.3%, nasal blockage 78.6%, runny nose 50.0%, decreased sense of smell/taste 57.1%. Symptom prevalence in patients with the formation of recurrent polyps: need to blow nose 55.6%, nasal blockage 88.9%, decreased sense of smell/taste 66.7%. No statistically significant associations between groups were found.

Conclusions

No statistically significant difference was found between primary polyp group and recurrent polyp group. Subjective complaints in case of recurrent nasal polyps were not significantly different from the ones observed in case of primary nasal polyps. Recurrence reduces quality of life as much as primary polyposis. Further research is needed, as if there were a higher number of cases, than there could be a statistically more significant difference.

[962] Risk factors of intraoperative adverse events during laparoscopic liver resection

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Introduction

Laparoscopic liver resection (LLR) is an established approach, however still not commonly performed. Long learning curve, caused by high technical difficulty grade of LLR slows down its popularization. Defining factors increasing the risk of intraoperative adverse events (IAE) may help in safer and faster implementation of LLR.

Aim of the study

The aim of this study was to assess the risk factors for IAE during LLR.

Materials and methods

Based on the Polish Registry of Minimally Invasive Liver Surgery (PL-MILS), a group of 290 LLRs performed in Poland up to December 2020 was analyzed. Incidence of IAE was assessed in accordance to Satava classification (I- excessive blood loss or injury of adjacent organs; II- incidents requiring conversion; III- incidents leading to significant consequences for patient). Data of previous medical history, type and range of liver resection, difficulty score and tumor characteristics was evaluated as potential risk factors for IAE.

Results

IAE type I was observed in 36 (12,4%) and type II in 21 (7,2%) cases. No incidence of type III was observed. Main indication for LLR was malignant lesion (235; 81,0%), while the most common were colorectal liver metastases (145; 50,0%). There were 124 (42,7%) anatomical resections. Minor liver resection was the most common type of LLR (179; 61,7%), while the right and the left hemihepatectomies were performed in 36 (12,4%) and 15 (5,2%) cases, respectively. The most challenging LLRs in accordance to the Institute Mutualiste Montsouris difficulty grade was performed in 54 (18,6%) cases. Univariate logistic regression reveals technically major resection (OR=3,02; 95% Cl=1,42-6,45; p=0.004) and maximum tumor diameter (OR=1.03; 95%Cl=1.01-1.04; p<0.001) as risk factors for IAE. The ROC curve established the cutoff point as 45mm of maximum tumor diameter as a significant increased risk for IAE. Multivariate logistic regression proves maximum tumor diameter >45mm (OR=2,02; 95%Cl=0,91-4,47; p=0.043) and technically major resection (OR=3,44; 95%Cl=1,17-10,14; p=0.025) as independent risk factors for IAE.

Conclusions

Surgeons who would like to start performing LLR should be aware of IAE especially in cases of tumors with maximum diameter of >45mm. Technically major resections are independently associated with increased risk of IAE.

[963] Assessment of orbital floor reconstruction with polypropylene darning

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Introduction

Multiple surgical techniques can be used for the orbital floor reconstruction after neoplasm resections, such as pre-bent titanium mesh, optical navigation-driven bony reconstructions or eyeball suspension with fascia. Proper eye position and movement range after reconstruction are essential for satisfactory functional results and double sight prevention.

Aim of the study

Assessment of the postoperative result after orbit reconstruction with polypropylene darning technique or suspension with fascia.

Materials and methods

A retrospective analysis of the postoperative CT and MRI studies in 32 patients was performed. Among them in 11 cases (6 male, 5 female) all data were available. The mean age was 62,9. Histopathological diagnosis were squamous cell carcinoma in 4 cases, sarcoma in 5, adenocarcinoma in 1 and melanoma malignum in 1 case. Following measurements were performed on the CT or MRI scans: from eye globe midline to the skull midline and to the upper orbital rim, from the optic canal to the cornea, and an orbital projection (OP), which is a perpendicular line designed from the interzygomatic line to the cornea. The orbital volume was measured by planimetry, based on the summation of manually delineated areas obtained from a CT/MRI image. The orbital volume ratio (OVR) has been calculated. Statistica Software was used for data analysis.

Results

The results have shown a statistically significant difference between the OVR of operated and non-operated orbit for the eye globe suspension with fascia (121,81%) vs polypropylene darning (100,43%). There were no considerable discrepancies between mean orbital volume, orbital projection, or position of the eye globe in horizontal and frontal planes of operated and non-operated orbits.

Conclusions

The polypropylene darning or eye globe suspension with fascia are proper surgical techniques for orbit reconstruction after malignancy resections. OVR measurements revealed that polypropylene darning could be superior to the fascia suspension, but there is a need for further study on larger patients cohorts.

[1021] OR-MRS, BASIC and Recife scores as the predictors of severe complications after bariatric surgery - which one is the best?

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Introduction

Bariatric surgery was proven to be the most effective obesity treatment. However, co-morbid conditions in obese patients contribute to the incidence and severity of complications after intervention. Assessment of postoperative adverse outcomes, based on preoperative parameters seem to be crucial for surgeons in qualification process. Recently, OR-MRS, Recife, BASIC scores have been proposed as new risk stratification tools for complications after bariatric surgery.

Aim of the study

To validate the performance of OR-MRS, BASIC and Refice scores as the predictors of 30-day severe complications after bariatric treatment.

Materials and methods

The retrospective analysis included patients who underwent Roux-en-Y gastric bypass (RYGB) or sleeve gastrectomy (SG). The OR-MRS, Recife, BASIC scores were calculated for each patient. 30-day postoperative complications were considered severe as >=3 in Clavien-Dindo Classification. The score relationship with adverse outcomes was assessed by logistic regression analysis. Discrimination was evaluated by area under the receiver operating characteristic (AUROC) whereas calibration by Hosmer-Lemeshow test.

Results

Out of 1250 patients enrolled in our study 817 (65.36%) were women whereas 433 (34.64%) were men with mean age 43 years. 73.84% of patients underwent SG whereas 26.16% of them had RYGB. The most common comorbidities were: hypertension (67.04%), diabetes (31.28%) and obstructive sleep apnea (29.04%). Severe postoperative complications occurred in 2.56% of patients.

All analyzed scores had statistically significant capability of identifying adverse outcomes in logistic regression analysis (OR 1.23-1.69). Although, none of assessed models reach reasonable discrimination power (AUROC: 0.62-0.64), they did not lose their goodness-of-fit in Hosmer-Lemeshow test (p=0.15-0.74)

Conclusions

OR-MRS, BASIC and Recife scores can be used in preoperative assessment of severe complications after bariatric surgery. Further studies should focus on improving predictive accuracy of these models.

[1093] Reconstruction of the bone fracture mechanism in an aviation accident based on post-mortem imaging

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Introduction

Traveling by air increased over past few decades. The number of aircrafts increases with small single-engine airplanes representing up to 65% of them. Furthermore, single-engine airplanes hold the highest accident rate. Identification and investigation of bodies of victims involved in airplane disasters is often very difficult due to the massive damage to the body and dismembering, although it may be crucial in the investigation concerning the cause of disaster, especially in small single-engine airplanes crashes. In cases of challenging autopsies like ones of aviation disaster victims Post Mortem Computed Tomography (PMCT) may be a valuable addition to the investigation.

Aim of the study

The aim of the study is to discuss how analysis of bone fractures and other injuries may contribute to the reconstruction of events during an airplane crash.

Materials and methods

Two male victims of a single-engine airplane crash, who both had valid pilot license, were firstly scanned in PMCT and then examined during a conventional autopsy. Their bone fractures described in autopsy report and in PMCT scan were analyzed.

Results

Both victims had massive, multiorgan injuries. PMCT showed that both victims presented fractures of occipital condyles, cervical spine, lumbar spine, pelvic bones and neck of femurs, which are common injuries occurring, when a vertical force acts on a body (in this case vertical deacceleration). Furthermore, both victims had fractured facial cranium bones, clavicles, sternum and distal parts of their upper extremities, which are common injuries, when a horizontal force acts on a body (in this case horizontal deacceleration). One of the victims had noticeably more injured right side of the cranium which may suggest his head collided with something in the cockpit or with other pilot. Also one of the victims had fractures in carpal bones, ulna and radius, suggesting he could firmly gripped the yoke at the time of accident, meaning he could be in control of the plane in that moment which has its implication in forensic investigation.

Conclusions

Thanks to the analysis of bone fractures images obtained via PMCT we can imagine the possible falling path of the airplane and we can presume who was in charge of controlling the aircraft at the time of the accident. Due to that, analysis of bone fractures of aviation disaster victims can be valuable in the investigation concerning the cause of accident.

Surgical Case Report

Date:

Sunday, 30th May 2021, 12:30 PM

Jury:

Prof. dr hab. med. Maciej Karolczak
Prof. dr hab. med. Sławomir Nazarewski

Coordinators:

Aleksandra Matysiuk
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[766] A seemingly straightforward diagnosis... or is it? A case study of papillary thyroid cancer with bone and kidney metastases.

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Background

Thyroid cancers have heterogeneous clinical presentation. The most frequent type - papillary thyroid carcinoma (PTC) metastasizes through the lymphatic system to cervical nodes but in rare cases via the bloodstream to lungs. The second most frequent type - follicular thyroid carcinoma (FTC) is marked by hematogenous spread to lungs and bones. Metastases to the bones are often seen with breast and prostate cancer.

Case Report

A 51-year-old man experienced extreme lower back pain which on admission to the hospital turned out to be a pathological fracture of L2 vertebra. The patient underwent L2 laminectomy but the cause remained undetermined. A sample of tissue was histopathologically examined. Surprisingly, immunohistochemistry was positive only for thyroglobulin (TG) and thyroid transcription factor 1 (TTF-1), which suggested FTC metastasis to bone. Moreover, a tumor in the right kidney was found for further diagnosis. Thyroid ultrasound revealed two hypoechogenic foci in the right lobe and two normoechogenic in the left, both benign-looking of about 10mm, with the largest measuring 15x11.5x19mm. Therefore, the patient was referred to the Department of Oncological Endocrinology and Nuclear Medicine for thyroidectomy with cervical lymphadenectomy. The laboratory tests showed increased TG level (2574 ng/ml). Postsurgical histopathology unexpectedly revealed not FTC but PTC pT1bN0M1 in both lobes. One tumor infiltrated its capsule but not thyroid's; no angioinvasion or lymph node metastases were found. The patient was offered 4 sessions of radioactive iodine therapy (RAI). He also underwent laparoscopic partial nephrectomy because of confirmed PTC metastasis. However, post-therapeutic scintigraphies revealed uptakes in the cervical region, IV right rib and lumbar vertebrae. Skeletal uptakes were accumulating with every cycle despite the higher dose of therapeutic radiation. The patient remains under Department's care and is due to have 5th RAI session in July. A targeted therapy with lenvatinib or sorafenib is considered.

Conclusions

In metastatic bone disease, it is worth performing not only tests directed for the most frequent causes, but also a thyroid ultrasound - fast and easy procedure which can prove useful in detecting potential primary lesion. Any delay in diagnosing the primary site is likely to result in poor outcomes. Nowadays, biological targeted therapy can be the last hope for effective treatment in case of failure of other methods.

[772] Prevention of spinal cord ischemia via endovascular treatment in Marfan syndrome

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Background

Marfan syndrome (MFS) is a connective tissue disease-causing mutation in one of the major proteins of the extracellular matrix. Symptoms of the MFS may vary, nevertheless, regardless of MSF manifestation, the main causes of MSF patient's death are cardiovascular sequels primarily thoracoabdominal aortic aneurysm (TAAA). Staged endovascular treatment of TAAA is preferred in patients with MSF as prevention from spinal cord ischemia (SCI) which may occur in such extensive aortic surgery.

Case Report

A 40-year-old patient was admitted to our hospital due to acute abdominal pain. Examination revealed a pulsing bulge in the umbilical region. A patient suffered from MFS aortic insufficiency, mitral valve prolapse, and arterial hypertension. A pre-operative angio-CT scan revealed thoracoabdominal aortic dissection. Aortic diameter was 66 mm and increased by 10 mm in 6 months. In addition, it was very symptomatic, which was a direct indication for a procedure. The CT scan also presented an occlusion of the left subclavian artery.

A cardiac surgeon discarded him from the classical surgical procedure as the risk was considered to be too high. The first stage of the treatment involved stent-graft implantation into the thoracoabdominal aorta with branches to the left iliac artery, left and kidney arteries, superior mesenteric artery, and coeliac artery. The further implantation to the right iliac artery was held off and planned for the next hospitalization. The patient was discharged from the hospital in a good general condition.

Conclusions

SCI remains one of the major complications in this type of procedure. There is no perfect method, but staged treatment gives promising effects. The sex, diameter of TAAA, history of previous aortic surgeries, occluded left subclavian artery, operation time and number of branched vessels indicated he is a high-risk patient. Another solution, however less effective, can be CSF drainage. Therefore, as the SCI incidence with t-Branch is significantly high, it is important to develop additional SCI prevention methods. One of the solutions is a staged procedure. Several studies have proposed that a staged approach was effective in reducing the rate of SCI to approximately 5%.

The staged procedure is preferred in patients with MFS as it is important not to close intercostal and lumbar arteries in a short time as the blood supply of the spinal cord is very limited. This method allows gradual change in spinal cord vascularization.

[840] Co-occurring acute appendicitis and peptic ulcer perforation - a case report

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Background

Acute appendicitis and peptic ulcer perforations belong to the most common causes of the acute abdomen. Both conditions manifest themselves similarly - through abdominal pain, nausea, vomiting, abdominal guarding, rebound tenderness - and, in rare cases, such as the one reported here, they may co-occur in the same patient.

Case Report

A 36-year-old male was admitted to the Department from the A&E as a result of a 1-week-long history of abdominal pain, which severity increased significantly on the day of admission. The patient did neither vomit, nor passed stool on the day of admission. Due to restricted communication taking a more thorough history wasn't possible.

An abdominal X-ray didn't show any signs of ileus or of free air under the diaphragm, whereas an abdominal CT scan revealed a thickening of the appendix to 9 mm - which suggested acute appendicitis. There was free fluid in its area with no signs of perforation. Complete blood count showed leucocytosis and neutrophilia, the C-reactive protein level was subtly increased.

Empiric antibiotic therapy was started and the patient was qualified for a classical appendectomy. The inflamed appendix was excised. During the course of the surgery, a large volume of purulent content was found in the true pelvis area.

In the postoperative course the patient complained of persistent pain. On the second postoperative day, the patient didn't pass stool, gas or urine, and his abdomen was tender to palpation over its entire area. Because of the presence of symptoms of peritonitis, and increasing inflammatory parameters a second abdominal CT scan was performed, which revealed signs of an alimentary tract perforation in the pyloric region. The patient was qualified for reoperation, the peptic ulcer perforation was sutured and a peritoneal lavage was performed.

On the tenth day after admission, the patient's condition was good, he wasn't pyrexial, his abdomen was soft. Peristalsis was present, he passed gas and stools, tolerated oral diet and was discharged from the hospital.

Conclusions

Co-occurrence of diseases with overlapping symptoms may be a problem to diagnosis, especially when a thorough history-taking potential is limited. The reported case clearly shows that even A&E patients may suffer from more than one disease that demand urgent care, and shows the importance of thorough diagnostics and postoperative observation of patients.

[846] Doctor, this was just a mole! - case study of 51-year old male suffering from Fournier gangrene.

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Background

Fournier's gangrene is polymicrobial synergistic necrotizing fasciitis of the perineum or genital area. This infection leads to thrombosis of blood vessels, and as a result, to necrosis of overlaying cutaneous tissue. Although it is proven that age over 50, male sex, neutropenia, history of abusing alcohol and diabetes mellitus accelerate the possibility of presenting this disease, it can also be idiopathic. Mortality is high and averages 20-40-%. Proper diagnosis is significantly important because early surgical debridement and antibiotics implementation increase the chances of recovery.

Case Report

We would like to present a case of 51- year old alcohol abuser with hypertension suffering from Fournier gangrene. The patient reported to Emergency Ward because of scrotal swelling and pain, claiming that it was not connected with any trauma. The man complained of dysuria, that anti-inflammatory drugs did not relieve. Physical examination revealed redness about the peritoneal area, hypotension and tachycardia 100 beats per minute. The extent of USG examination demonstrated thickening the wall of the abdomen and complex fluid collection consistent with scrotal abscess. Based on clinical symptoms Fournier gangrene was diagnosed. The patient's treatment included surgical intervention and antibiotic therapy (piperacillin, tazobactam, and vancomycin).

Conclusions

Symptoms of Fournier's gangrene are usually not alarmed for patients suffering from this disease thus they report to the hospital in a late stage. It is significantly important to make a proper diagnosis, that is based mostly on clinical examination, because it allows to implementation of aggressive antibiotic therapy and surgical debridement. Early recognitions increase the patient's chances of full recovery.

[868] Adhesions - a banal complication or a life-threatening condition?

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Background

Peritoneal adhesions are the most common late complication of laparotomy. The frequency of their occurrence depends on many factors such as duration and scope of surgery, genetic factors and patient's activity in the postoperative period. The most severe consequence of their presence is mechanical obstruction. However that particular complication occurs only in a small percentage of patients.

Case Report

We would like to present a case of a 38-year-old female patient with no accompanying chronic diseases, admitted to the clinic due to reoccurring episode of adhesion obstruction induced by past caesarean sections. Initially treated conservatively during subsequent hospitalizations the patient required over a dozen laparotomies due to obstruction and related complications. During performed surgeries about 10 cm of ileum, sigmoid and bilateral ovaries were resected. Disruption of the gastrointestinal tract continuity resulted in final ileostomy creation. No attempts were made to restore the continuity of the gastrointestinal tract due to high risk of further postoperative complications. Numerous surgeries resulted in significant loss of the parietal peritoneum, intestinal retroperitoneal fistula, and consequently retroperitoneal abscess complicated by septic shock. Consequently a massive necrosis of tissues in the left lumbar region and left half of the dorsum formed. Therefore, the patient required long-term vacuum therapy (VAC). Significant losses of abdominal wall (9-10% of the body surface) were covered with split-thickness skin grafts. The patient is currently under constant care of a surgical clinic.

Conclusions

Despite the significant developments in medical knowledge and techniques, modern surgery is still unable to fully prevent the formation of postoperative adhesions which are the result of inadequate activation of fibrinogenic processes compare to insufficient fibrinolysis. Factors increasing the risk of adhesions include: diabetes, obesity, oral hormone therapy, co-occurrence of cancer, inflammatory diseases and genetically determined coagulation disorders. Equally important is our inability to identify patients groups with high risk of life-threatening consequences of adhesion presence.

[893] What CVC hides behind the back? - the case study

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Background

Central venous catheters (CVC) are commonly used in the Intensive Care Units. They enable to successfully deliver medications, blood transfusion and parenteral nutrition, maintaining life in patients whose state is critical. Although using CVC seems to be necessary to improve their chances of recovery, this intervention could lead to various complications. The most common are infections and mechanical damages of the catheter, but there is also a possibility of inappropriate implantation the catheter that results in puncture of adjacent structures. We would like to present a case of 49-years old man with iatrogenic damaged of right subclavian artery (RSA).

Case Report

49- year-old male patient in a septic state underwent urgent right hemicolectomy because of intestinal obstruction and perforation with subsequent peritonitis. During the surgery the CVC was implanted. After the surgery the patient was transferred to the ICU. It was not until then when due to extremely high central venous pressure values an intraarterial placement of CVC was suspected. The patient was consulted by a vascular surgeon and taken back to the hybrid operative room. The inspection revealed a CVC introduced through a cutaneous puncture in a mid-neck region. The ultrasound confirmed an intrajugular position of the catheter in the neck. The cone-beam CT angiography (CBCT-A) however demonstrated the at the base of the neck the CVC was entering the RSA.

A decision was made to close the RSA puncture site with a plug-based arterial closure device (Angioseal). To secure the puncture site an angioplasty balloon was introduced through femoral access into the RSA. The balloon was inflated, the CVC was removed, and the RSA puncture successfully closed with Angioseal.

Conclusions

Mid-neck jugular puncture does not preclude more proximal arterial injury. Ultrasound and CBCT-A are useful modalities for detection and the balloon protected closure with Angioseal is a safe technique of the treatment of such lesions.

[910] Familial Adenomatous Polyposis (FAP) - Case Report

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Background

One of the most common adenomatous polyposis syndromes is Familial Adenomatous Polyposis (FAP), an autosomal dominant inherited disorder. Characteristic feature of FAP is the early onset of hundreds to thousands of adenomatous polyps throughout the colon and rectum. Colorectal cancer develops early if the condition is left untreated.

Case Report

A 33-year-old male patient with history of gastritis completed one-year of treatment in 2017-2018. Few months later patient experienced abdominal pain and weakness in passing stool. He referred back to his gastrologist in the district hospital where he underwent the same therapy and three gastroscopic examinations were further performed during multiple visits in 2018-2019. When the patient felt that his condition was not improving, he decided on changing the hospital. In one of Wroclaw hospitals it was found that the patient's father passed away at the age of 58 due to colorectal cancer secondary to FAP. The patient had colonoscopy performed in which over 200 colorectal polyps were found. In MRI of the pelvis within the sigmoid colon and rectum numerous polyps of varying sizes were found. A CT of the abdomen was also performed and showed an irregular soft tissue lesion in the sigmoid colon suggested the presence of cT3N1 grade sigmoid flexion tumor. No significant changes were found in the blood tests. The case was presented during the tumor board and was then managed with lower and middle laparotomy, proctocolectomy with complete meso-colic excision (CME) and total meso-rectal excision (TME), with formation of small intestine reservoir (pouch), low ileorectal anastomosis and protective loop ileostomy (18.11.2019). Histopathological report showed sigmoid flexion G2 adenocarcinoma pT3N0 with a surprisingly large number of 160 lymph nodes found. Now patient is in good overall condition, waiting for mini laparotomy to close protective loop ileostomy.

Conclusions

Regardless of the advancements in medicine, such as genetic studies and sophisticated diagnostic equipment many colorectal cancer patients go undiagnosed and are not being given the proper care, which may impact overall survival time. Therefore, one must remember to properly perform patients' examination, where patient's and family history can play crucial role.

[914] Appendicitis - a never ending story

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Background
Acute appendicitis is the most common indication to urgent surgery. This procedure may lead to many complications both early and late, which include mechanical obstruction due to adhesions or hernia in postoperative scar. Liver abscess or stump appendicitis are less common. According to literature the incidence of stump appendicitis is seen in 0.004% patients and the average time from the initial operation to its occurrence is about 8 years.

Case Report
We present a case of 72-year-old female patient hospitalized in the Clinic because of acute pain in the right lower quadrant with no other symptoms. Patients underwent appendectomy about 50 years prior. On the basis of the clinical examination and additional studies she was qualified for a laparotomy. Intraoperatively stump appendicitis including the caecum was diagnosed. The altered appendiceal stump resection was performed. Initial diagnosis was confirmed in histopathology. During postoperative period an infection of operation wound occurred.

Conclusions
Rare incidence of stump appendicitis may translate into delay in making a proper diagnosis, which in turn increases the risk of secondary complications. Appendiceal stump inflammation may occur even many years after original surgery. Due to the significant influence of the left stump length on the occurrence of this complications, stump should be left as short as possible.

[960] Laparoscopic right hemicolectomy in surgical management of hepatic flexure large lipoma- case report

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Background

Lipomas are benign nonepitheal tumors, composed of lobulated, mature and typical adipose cells, that can be found throughout the gastrointestinal tract. The reported incidence in literature for colon lipomas ranges between 0.2% and 4.4%. Rarely, they grow larger than 3 cm in size and can cause intermittent bowel obstruction, abdominal pain and even bleeding if they develop superficial ulceration.

Laparoscopic resection with mechanical anastomosis is the treatment of choice when the tumor is symptomatic and if the lesion occupies most of the intestinal lumen. Furthermore, minimally invasive surgery offers an early postoperative restoration of bowel motility, lower complication rates and fewer incisional hernias, which are more frequent when open surgery is performed.

Case Report

We present a 56-year-old male, with no significant medical history, admitted in our surgical department with the following symptoms: abdominal pain, bowel habit changes and unexplained weight loss. Laboratory tests show leukocytosis and positive C-Reactive Protein. Abdominal computed tomography scan with contrast reveals a 7x5cm mass located at the level of the hepatic flexure of the colon that associates locoregional lymphadenopathy. Considering all the clinical and paraclinical aspects, a laparoscopic right hemicolectomy is performed. First, we dissect the branches of the superior mesenteric artery and the superior mesenteric vein and place clips on the ileocolic, right colic and right branch of the middle colic vessels. The terminal ileum, as well as the transverse colon, is transected with a laparoscopic stapler. The affected lymph nodes are also extracted, allowing a complete staging, if the tumor proves to be malignant. The procedure ends with an intracorporeal side-to-side ileocolic mechanical anastomosis. Histopathological analysis reveals a 60x25x25mm lipoma in the colon's submucosa with extension to the serous layer, along with 11 lymph nodes. The patient had an uneventful postoperative course, with early restoration of bowel motility and therefore was discharged six days after surgery.

Conclusions

The laparoscopic approach has better outcomes not only in benign tumoral pathology, but also when malignancy is confirmed or uncertain. Besides the well-known advantages of the minimally invasive technique, such as early recovery, less postoperative pain, shorter hospital stay and lower complication rates, laparoscopic colectomy also allows an accurate regional lymph node dissection.

[961] Transperitoneal approach of left adrenal pheochromocytoma- case report

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Background

Pheochromocytoma is a rare catecholamine-secreting tumor, derived from the adrenal medulla, which appears either sporadically or in multiple endocrine neoplasia syndrome(MEN). Symptoms usually occur due to mass effect or by catecholamines overproduction, which may cause or precipitate preexisting hypertension and cardiac arrhythmias. Since the initial report by Gagner in 1992, laparoscopic approach has rapidly emerged as gold-standard for adrenal gland tumors. Initially, the laparoscopic procedure was controversial in pheochromocytoma due to hemodynamic variations caused by high intraabdominal pressure and the additional catecholamines release. However, studies showed that adrenal secretion was lower than in open surgery and that the early laparoscopic ligation of the adrenal vein lowers the possibility of complications.

Case Report

We present the case of a 72 year-old female, with a history of chronic coronary artery disease, drug-resistant arterial hypertension, NYHA II cardiac failure, coronary stent angioplasty for myocardial infarction, dyslipidemia, hypothyroidism, who was admitted in our surgical department with repetitive hypertensive crisis, associating skin pallor, headaches, tachycardia and sweating. Based on clinical and laboratory examinations, correlated with a 50 mm diameter adrenal mass revealed by CT and high levels of urinary metanephrines, the patient is diagnosed with left pheochromocytoma. A left laparoscopic transperitoneal adrenalectomy was performed. Dissecting the left adrenal gland requires an incision along Toldt's fascia, allowing mobilization of the splenic flexure of the colon. The left adrenal gland could be easily approached after exposing the inferior spleen pole, the pancreatic tail and the left kidney. The adrenal vein is clipped before the resection.The encapsulated adrenal gland is then excised along with the tumor and the specimen is removed from the abdominal cavity in an Endobag.

Conclusions

Postoperative evolution is favorable and the patient is discharged without any complications three days later.

The anatomical location of the adrenal gland has led to the development of numerous laparoscopic techniques, but the anterior transperitoneal approach seems to be the most suitable in cases of pheochromocytoma. Laparoscopic adrenalectomy is a safe and effective method for this particular tumor; its benefits include less intraoperative hemorrhage, early postoperative recovery and therefore shorter hospital stays for these patients.

[970] Gossypiboma of the multifidus muscle

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Background

Gossypiboma is the name of a group of complications after surgeries as a result of foreign objects left in patient's body, which leads to serious forensic problems between patients and doctors.

Diagnosis is difficult since the symptoms are nonspecific and can manifest years after surgery simulating tumours. The frequency is 1 case per 100-3000 of all surgical interventions.

Case Report

Patient N. 50 y.o. entered the Regional Clinical Hospital in 2010 suffering dull and shooting lower back pain, feet and toe numbness, a feeling of crawling goosebumps. After neurological examination the following preliminary diagnosis was made: "Discogenic lumbosacral dorsopathy. Severe pain syndrome". A lumbar MRI was prescribed. As a result, the main diagnosis was made: "Paramedian disc herniation L2-L3 with compression of cauda equina roots. Spinal stenosis. Chronic pain syndrome". Surgical treatment was prescribed - extended decompressive laminectomy, removal of a herniated disc L2-L3, transpedicular stabilization. The postoperative period was uneventful. Subsequently patient did not suffer lower back pain.

10 years later, in August 2020, suffering an aggravated pain syndrome of the same localization and subfebrile temperature the patient entered the residential district hospital. CT: "Hyperdense (134 HU) volumetric formation at the level of the L4-L5 processum spinosum". Prior to the biopsy the patient was referred to a Federal Centre of Traumatology for a lumbar MRI: "Post-surgery condition. A formation in the right multifidus muscle at the level of the L4 vertebra with clear contours, having a capsule containing calcinates, measuring 28x33x43 mm; an old sequestration of the intervertebral disc L2-L3, the formation of stenosis in the left intervertebral foramen. Degenerative disc disease in the lumbar spine". Surgical treatment was prescribed. A surgical sponge was found in the muscle. It was completely excised along with the surrounding fibrous capsule. The postoperative period was uneventful.

Conclusions

Diagnosis of gossypiboma is difficult even despite the diagnostic capabilities of modern medical imaging methods. It can be clinically asymptomatic for a long time. Suspicions of Ð° foreign body presence arise only after the development of complications.

Gossypiboma should be included in the differential diagnosis of paraspinal soft tissue neoplasms in patients who have undergone spinal surgery.

Surgical sponges with radiopaque markers should be introduced into practice.

[977] Extracorporeal rewarming for severe accidental hypothermia treatment in a SARS-CoV-2-positive and -negative patient: two case reports

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Background
The diagnosis of accidental hypothermia (HT, T68, core temperature <35Ś°C) constitutes a medical emergency. Severe hypothermia (<28Ś°C) substantially increases the risk of cardiac arrest (CA). We report two cases of severe hypothermia treated by means of extracorporeal circulation in the SARS-CoV-2 pandemic setting.

Case Report
Case 1 was a 36-year-old male, found unconscious and admitted to the emergency room in CA. Diagnosed with severe HT (25Ś°C), ventricular fibrillation, and cardiopulmonary (CP) failure, the patient underwent femoro-femoral veno-arterial extracorporeal circulation (ECC) implemented during cardiopulmonary resuscitation (LUCAS-CPR). Normothermia and return of spontaneous circulation were achieved within 5 hours of ECC rewarming protocol. Postoperative care continued in the COVID-ICU as patient was SARS-CoV-2-positive. He was discharged with no neurological complications from COVID-ICU on day 11 after being declared SARS-CoV-2-negative. Sepsis and acute exacerbation of CP failure occurred 5 weeks thereafter. Targeted antibiotic therapy for tuberculosis complicated by multidrug-resistant Acinetobacter baumanii provided only marginal improvement. Features of multiple organ failure increased despite intensive therapy and death was pronounced on day 48 due to asystolic CA.
Case 2 was a 61-year-old female presenting with unconsciousness and bradycardia on admission, diagnosed with severe HT (23Ś°C), non-bacterial pleural effusion, and myxedema coma. Femoro-femoral veno-arterial extracorporeal membrane oxygenation (ECMO) restored normothermia and normal heart function. She was SARS-CoV-2-negative and discharged from the ICU within 6 days only to be readmitted after a few hours due to diazepam-induced asphyxial CA. Resuscitation was successful and remainder of hospitalisation was unremarkable. Discharge home was possible within 15 days.

Conclusions
The adage „a patient is not dead until warm and dead' is the object of clinical studies as the mortality rate of hospitalised severe accidental HT patients remains very high. The lifesaving potential of ECC and ECMO protocols is limited by the small number of centres employing extracorporeal blood rewarming, scarcity of diagnostic algorithms (including absence of consensus for temperature measurement), and general lack of evidence-based practice. However, even during the SARS-CoV-2 pandemic, treatment of hypothermic patients yields satisfactory early results, limited mostly by comorbidities.

[991] Coexistence of colorectal cancer and pancreatic cancer - diagnostic problems.

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Background

Colorectal cancer is one of the most common cancer in the world. It develops slowly and usually presents symptoms when is fully resectable. On the other hand, pancreatic cancer is a typical silent killer, which symptoms do not usually appear in the disease's early stages. From this reason surgical intervention in many cases is impossible. Coexistence of malignancies is rather rare and may cause many diagnostic problems and delay appropriate management.

Case Report

A 71-year-old woman was admitted to the hospital due to increasing ascites and periodic abdominal pain. During colonoscopy and in CT scan cancer of cecum without metastasis was detected. The patient was qualified for operation. The operation was performed without any complications. During the first postoperative days the patient general condition was satisfactory. However, persistent ascites pushed doctors to re-examine the entire diagnostic process, including made at the beginning CT scan. As a result, a suspicion of inoperable pancreatic head tumor with portal vein infiltration and thrombosis was raised. To confirm the diagnosis a CT-guided biopsy was planned, but it did not take place due to the patient's rapidly deteriorating condition. Additionally symptoms of gastrointestinal haemorrhage appeared, the cause of which was Dieulafoy's lesion successfully treated endoscopically. Because of persistent abdominal pain CT scan was performed again, which revealed a retroperitoneal abscess. The abscess was drained percutaneously. Subsequently, micro leakage of the ileo-transverse anastomosis was observed, relaparotomy with peritoneal lavage was performed. In the postoperative period, patient's general condition deteriorated extremely. Despite intensive therapy patient died.

Conclusions

Early diagnosis of diseases or their co-morbidities has a great impact on the therapeutic management and patient’s prognosis of survival. The above case demonstrates how making a correct diagnosis can be challenging especially if malignancies overlap.

[1004] Minimally invasive treatment of the advanced recurrent chronic venous insufficiency in a patient with a history of bilateral saphenectomy - a case report

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Background

Nowadays, due to an unfavorable sedentary lifestyle chronic venous disease is a one of the most common health conditions. Fortunately, the dynamic development of minimally invasive techniques of treatment has led to a huge progress in the management of chronic venous disease. There are many modalities in the phlebological armamentarium, which can be chosen to eliminate axial reflux, which is responsible for the progression of disease in the majority of cases. These include non- or thermal and non- or tumescent procedures, and combination of these, performed under local anesthesia with an immediate, comfortable recovery.

Case Report

A 55-year old male patient presented to the vascular surgeon due to an intensifying redness, increasing pain, feeling of oedema and a discomfort in both lower legs. He had, right and left saphenectomy 6 years earlier, a thrombosis of GSV(great saphenous vein) and ASSV (anterior accessory saphenous vein) on the left leg and varicose veins thrombosis on the right leg. The patient was administered with medical compression stockings and venoactive drugs due to diffuse throphic changes of the skin, hardness of the fascia and subcutaneous tissue.

The doppler ultrasound study revealed refluxing remnants of GSV trunks on both legs starting from the 1/3 part of thighs down to the left knee level and upper 1/3 part of right calf. GSV trunks contained numerous fibrotic, post-thrombotic changes. The reflux from GSVs fed extended varicose veins on thighs and calves, with lots of post-thrombotic fibrotic changes in the lumen. On the left side some recurrent varicose veins were visible on the thigh due to refluxing PASV(posterior accessory saphenous vein) and on the right side - due to refluxing AASV.

Two stages of the treatment were planned and implemented: for the left side - EVLA(endovenous laser ablation) of PASV and GSV and for the right side EVLA of AASV and GSV with concomitant sclerotherapy. The postprocedural course was uneventful for both legs. Two months later additional sclerotherapy of the remnants of varicose veins were performed successfully.

A 2-month follow-up revealed good postprocedual effect and the venous insufficiency symptoms diminishing.

Conclusions

The development of endovenous techniques used in chronic venous disease allows safe and efficient treatment even in patients with severe stages of the disease protecting them from more possible complications of open surgeries.

[1047] Traumatic vertebral artery dissection in association with chiropractic neck manipulations

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Background

Vertebral artery dissection (VAD) is a rare cause of stroke, but more common cause in patients younger than 45 years of age. Neck distortion like chiropractic manipulation, bending of the neck or blunt trauma often causes the dissection. There is no conclusive link between chiropractic manipulations and VAD, but increased association has been identified and has led to limited established benefits of neck manipulations.

Case Report

A 31-year-old man presented to the Riga East University Hospital Emergency Department with acute complaints of numbness to right side of the face,arm,nausea,dizziness, and severe headache. Symptoms occurred 30 minutes after neck manipulations done by chiropractor and sports medicine doctor to resolve functional C1 block. At the Emergency Department patient was in severe condition, still conscious, GCS 14. Neurological examination revealed diplopia, gross horizontal nystagmus, progressive dysarthria, dysphagia and dysphonia. Hemiataxia in the right arm and leg, hypoaesthesia to right side of the face, arm. NIHSS 9,mRS 4. CT angiography was performed by vital indications and there was an evidence of hypoplasia and intramural hematoma with luminal occlusion of the V3 right vertebral artery segment, along the atlas loop, which suggested posttraumatic dissection. Immediate thrombolytic therapy was performed. However, patient's condition was rapidly worsening, he became unconscious, GCS 3, developed respiratory failure, was put on mechanical lung ventilation. Head MR scan revealed severe ischemic infarction to the right hemisphere of cerebellum with extensive edema and brainstem compression. Due to secondary CSF dynamic disorders, ventriculostomy was placed into frontal horn of the right lateral ventriculi. Despite that, patient also underwent posterior fossa decompression craniectomy. Afterwards, patient regained consciousness, could follow orders. He developed partial bulbar palsy and it was necessary to place tracheostomy, percutaneous endoscopic gastrostomy. While recovering, he received early rehabilitation, was discharged to a specialized rehabilitation center for further treatment. NIHSS 5,mRS 4.

Conclusions

For patients who survive the initial acute dissection, the prognosis is good with complete recovery in 80-90%. However, patients with severe neurological deficits at the time of presentation usually have a poor prognosis. Complications are associated with cerebellar, brainstem infarctions, subarachnoid hemorrhage, and death at 10% of incidence.

[1056] Mitraclip procedure as a bridge leading to the heart transplantation

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Background

The list of exclusion criteria for the heart transplantation (HT) is long. One of the contraindications is irreversible pulmonary hypertension (PH).

Case Report

62-year-old man was admitted with heart failure (HF) of ischaemic etiology in NYHA class III with reduced ejection fraction (EF=15%), atrial fibrillation and diabetes. The patient underwent screening as a candidate for HT. Echocardiography showed pulmonary hypertension features (right ventricle systolic pressure RVSP=70mmHg), dilation of the left ventricle (LVEDD=74 mm) and moderate mitral regurgitation (MR). Right heart catheterization confirmed severe PH (mean pulmonary artery pressure (mPAP)=54 mmHg), pulmonary capillary wedge pressure (PCWP)=25mmHg, pulmonary artery resistance (PAR)=10.3 Wood units without a satisfactory response to the iloprost. Due to PH, the patient was disqualified from HT. Off label sildenafil was started and routine heart failure treatment continued.
During the next hospitalization 7 months later experimental pulmonary artery denervation was performed, which did not lead to significant decrease of PH (RVSP=67mmHg). Due to the patient's condition he was disqualified from the surgical treatment of significant at that time MR and scheduled for the MitraClip procedure. During the MitraClip procedure a reduction of the grade of MR from severe to mild was achieved. Treatment including sildenafil was continued.
After 4 months follow-up control right cardiac catheterization revealed a profound decrease of PH (PAR=<2,5 Wood units, mPAP=36 mmHg, PCWP=24 mmHg). Following those findings and continuously present of heart failure symptoms in NYHA class III the patient was requalified for an orthotopic HT, which was performed 5 months later using a bicaval anastomotic technique.
After surgery, the patient received a standard triple immunosuppressive regimen - tacrolimus, mycophenolic acid and glucocorticoid. Despite histopathological signs of acute rejection in the first 3 biopsies, he remained stable. Follow up echo showed slight general hypokinesis with LVEF=50%.

Conclusions

Reduction of the grade of MR using the MitraClip procedure for a patient disqualified from standard surgery can reduce the symptoms of HF and MR. In this particular case combining percutaneous edge-to-edge repair and pharmacological treatment improved the patient's condition and allowed for a heart transplantation.

[1057] Mechanical Circulatory Support as a bridge to recovery after viral myocarditis in 16-month-old child.

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Background

Parvovirus infections, frequently diagnosed in children, usually appear as erythema infectiosum and tends to resolve spontaneously, however, there is a possibility for severe clinical presentation. Parvovirus B19 causes transient aplastic crisis or neurological disorders, but is also linked with myocarditis. Such cardiac manifestation may lead to severe heart failure and require invasive medical procedure, including mechanical circulatory support (MCS).

Case Report

We report a case of a 16-month-old girl, born at 33 weeks, who presented acute heart failure due to parvovirus B19 infection. Both medical and family history were not relevant, and no abnormalities in psychomotor development were observed. Nevertheless, patient previously suffered from numerous respiratory tract infections.

On admission she presented respiratory and circulatory failure, requiring inotropic support. Echocardiography revealed dilated cardiomyopathy with decreased left ventricular ejection fraction (LVEF) of 25%. The MCS Berlin Heart Excor was implanted and supported her for 159 days until the ventricle function recovered. LVEF enhanced to 55% and left ventricular dimension decreased significantly. She was discharged home in an overall stable condition after the explantation of MCS device. In endomyocardial specimens, collected during implantation procedure, DNA of Parvovirus B19 predominated. HHV6-DNA and HHV7-DNA were also detected.

Conclusions

Considering the following case, the use of the MCS brought significant benefits for treatment of left ventricular failure associated with myocarditis and might be helpful in the regeneration process of the myocardium.

[1069] A case report of ruptured acute thoraco-abdominal aortic dissection

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Background

The aetiology of aortic dissection and the aortic aneurysm is different. In acute type B aortic dissection (TBAD), blood flow tears the intimal arterial layer, and the false lumen occurs in the medial layer. An aortic aneurysm is caused by elastic fibres degeneration in the arterial wall resulting in the dilatation of the aorta and may cause its rupture. The coincidence of abdominal aortic aneurysm (AAA) and TBAD is rather rare and complicates the treatment.

Case Report

A 62-year-old man was admitted to the hospital because of acute TBAD and AAA.

In the first two hours after admission, the patient presented clinical and tomographical signs of AAA rupture. Primary entry was found just behind the left subclavian artery. Additionally, there were many secondary entries in the descending aorta. Maximal diameter of AAA was 78 mm. The wall of AAA was dissected and ruptured to the retroperitoneal space resulting in a severe haematoma. The superior mesenteric artery and right renal artery originated from the true lumen, while the coeliac trunk and left renal artery (LRA) from the false lumen. The dissection of LRA caused its severe stenosis.

The patient was operated on immediately in hypovolemic shock with a blood pressure of 60/20 mmHg. The primary and secondary entries in the thoracic aorta were covered by two Zenith Dissection stentgrafts. It did not stop the perfusion of the false lumen and retroperitoneal bleeding. The subtraction angiography proved the tears in the origin of the coeliac trunk and dissected LRA. The tear in the true lumen was connected with LRA by a covered stent. A bifurcated stentgraft was implanted below renal arteries. Simultaneous ballooning of stents in the infrarenal aorta and LRA caused membrane fenestration and complete exclusion of the ruptured aneurysm.

The patient gradually recovered and has been followed in the outpatient department for a year.

Conclusions

Acute TBAD in patients with AAA causes a high risk of a rupture.
Both pathologies require simultaneous treatment.
Membrane fenestration in the infrarenal aorta can be useful for complete AAA exclusion.

[1086] Self-introduction of urethral foreign bodies in adolescent male - case report

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Background
Self-introduction of urethral foreign bodies in pediatric population has been rarely reported in the literature, although recently these incidents are rising problem especially among adolescents. Foreign bodies introduced into the genitourinary tract include various types of objects. Urethral foreign bodies phenomenon is often reported in patients with mental health disorders. The presence of a foreign object in the bladder or urethra may cause a serious problem to the patient and requires immediate evaluation and adequate intervention.

Case Report
A 14-year-old male was admitted to the Department of Paediatric Surgery and Urology as an emergency due to gradually increasing voiding difficulties over the previous 2 days led to anuria. Physical examinations and basic laboratory tests showed no abnormalities. Ultrasound showed overdistended bladder and the possible presence of small spherical foreign bodies, but patient denied self-insertion. X-ray examination was performed and showed the presence of multiple radiopaque metallic beads within the bladder and posterior urethra, after which the patient admitted to inserting about 30 magnetic beads into the urethra. As a first-line treatment cystoscopy was attempted. An endoscopic attempt was unsuccessful and small cystostomy was performed to evacuate 51 magnetic beads. There were no postoperative complications and the boy was discharged home with a scheduled psychological evaluation.

Conclusions
Self-introduced urethrovesical foreign bodies in pediatric population are rising problem. For lower urinary tract symptoms the presence of a foreign body should always be taken into consideration. Psychological evaluation is important to diagnose mental underlying disorders and thus reduce the risk of the episode recurring.